

June 14, 2019

Sudbury Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

**Re: Notice of Intent Application
293 Concord Road, Sudbury, MA**

1. Introduction

Goddard Consulting, LLC (GC) is pleased to submit this Notice of Intent (NOI), on behalf of Elizabeth Andrews, for proposed habitat restoration activities at the parcel known as 293 Concord Road in Sudbury, MA (Map H09, Lot 7). This application is a joint filing under the MA Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw.

The purpose of this NOI is to perform habitat restoration activities required in a Notice of Violation letter that was issued to the Applicant by the Conservation Commission on May 15, 2019. Specific project activities proposed in this NOI include:

- 1) Remove a pile of logs from a fallen tree that was cut up.
- 2) Install four native tree plantings within a portion of the BVW;
- 3) Remove two dead trees from the Buffer Zone / Adjacent Upland Resource Area.

2. Existing Conditions

The majority of the property is undeveloped woodlands and wetlands. The existing residence is located along Concord Road in the northeastern portion of the property. A maintained lawn extends westward from the home, and contains mature black walnut and white ash trees. The western portions of the property contains multiple intermittent streams and associated Bank and Bordering Vegetated Wetland (BVW) resource areas. The stream in the southern portion of the site is classified as a Coldwater Fishery Resource. The project is located over 200 feet from this sensitive resource area. A StreamStats analysis of this stream determined that its drainage area is 0.16 square miles, therefore it does not qualify as a River under the WPA.

The BVW boundary in the vicinity of the area of alteration was delineated with blue flags numbered GC1 to GC 8, and is presented on the attached Orthophoto. 100-foot Buffer Zone and Adjacent Upland Resource Area (AURA) extend 100 feet from the BVW flags.

A portion of the BVW was altered prior to 2012, when the Applicant took ownership of the property. There are seven old stumps and stacked logs within and adjacent to the BVW in the area demarcated as the Alteration Area ("AA"). The following photo shows the AA (facing west), just to the right and away from (west of) the large red maple tree. Wetland flag GC4 is visible to the right.



In the following photo facing east toward the residence, two stumps within the AA are seen in the center.



As can be seen in the above photos, the AA is presently greater than 90% vegetated with native herbaceous species, including jewelweed, skunk cabbage, royal fern, cinnamon fern, sensitive fern, Canada mayflower, goldenrod, poison and Virginia creeper. Unidentified grasses are also dominant in the AA. No invasive species were present in the AA. In summary, the portion of BVW that was historically altered (seven trees cut by a previous owner) is presently a healthy, functioning natural habitat that contains wet meadow characteristics.

A small foot path exists just north of the BVW, connecting the lawn area to a parking lot behind the commercial building off Hudson Road. A wooden board had been placed over a muddy portion of this path, but the board has been removed.

In 2018, the Applicant cut two storm-damaged trees and stacked the logs in a pile outside of the BVW. The Applicant did not cause any harm to the BVW or AURA from these recent activities. Just east of wetland flag GC 1 is a pile of logs and branches from the unpermitted cutting of storm-damaged trees by the Applicant.

3. Proposed Conditions

The applicant proposes to restore some of the lost forested habitat within the AA by planting four new native trees (three river birch and one red maple). Since the area is already densely covered by native herbaceous species, no additional shrub or herbaceous plantings are proposed. The wet meadow actually increases the habitat diversity of the site and provides cover for amphibians, foraging habitat for small mammals and insects. The details of the Habitat Restoration are described in the attached document "Habitat Restoration Plan," prepared by Goddard Consulting, dated 6/13/19. The logs from recently cut up storm-damaged trees by the applicant will be removed or relocated into the nearby BVW and AURA. Portions may be burned during the next burning season.

4. Resource Area Performance Standards Analysis

4.1 Under the WPA

The proposed work will occur in BVW and Buffer Zone. Since the proposed work consists of the restoration of undeveloped habitat with plantings of native species, there will be no adverse impacts and an actual improvement over existing conditions.

4.2 Under the Bylaw

Section 7.2 of the Bylaw Regulations provides performance standards for work within the AURA.

The proposed work will improve upon the existing conditions of the site. The removal of a log pile, coupled with the restoration of a native forest cover will benefit not only the wildlife but also will improve the water quality and enhance the ability of the resource areas to contribute to the wetlands values protected by the Bylaw.

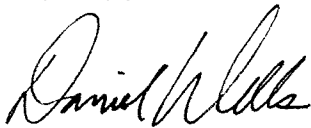
5. Documents Submitted for this NOI

Three hard copies of the NOI application are enclosed, and the titles of all the documents enclosed are as follows:

- WPA Form 3 with Wetland Fee Transmittal Form
- Copy of Checks
- Abutter's list and Map
- Notification to Abutters, Affidavit of Service
- *Orthophoto View of Site*. Goddard Consulting, LLC. 6/13/19
- *USGS Site Locus*. Goddard Consulting, LLC. 6/5/19
- *DEP BVW Datasheets*
- *StreamStats Report*
- *Habitat Restoration Plan*, Goddard Consulting, LLC, 6/13/19

Please feel free to contact us if you have any questions.

Very truly yours,



Dan Wells
Senior Wetland Scientist and Wildlife Biologist

CC: Elizabeth Andrews, 293 Concord Road, Sudbury MA 01776
MassDEP, NERO, 205B Lowell Street, Wilmington, MA 01887

June 13, 2019

Habitat Restoration Plan

293 Concord Road
Sudbury, MA

Submitted to:

Sudbury Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

Prepared for:

Elizabeth Andrews
293 Concord Road
Sudbury, MA 01776

1. INTRODUCTION

On behalf of the Applicant, Elizabeth Andrews, Goddard Consulting, LLC is pleased to submit this Habitat Restoration Plan as a component of the Notice of Intent filed for 293 Concord Road in Sudbury, MA. Restoration is proposed to the west of the existing residence, in order to restore an area of un-permitted vegetation removal.



2. RESTORATION PLAN SUMMARY

2.1 Habitat Restoration Area Location

This includes a portion of BVW that had seven trees removed by a previous landowner (prior to 2012) and a nearby portion of Buffer Zone and Adjacent Upland Resource Area (AURA) where two storm-damaged trees were cut up and piled.

2.2 Habitat Restoration Plan Components

The plan includes log pile removal and four native tree plantings.

3. RESTORATION PLAN DETAILS

3.1 Overview

Supervision: All work within the restoration area shall be supervised by a qualified wetland scientist or biologist with a minimum of five years' experience. The supervisor shall submit

monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Timing: Log pile removal may take place at any time of year. Restoration area plantings should be installed during the Fall 2019 growing season.

3.2. Sequencing of Procedures

Step 1: Define Limits of Work

The wetland scientist shall flag or otherwise clearly identify the areas subject to the plan. Erosion control barriers shall not be necessary due to the timing and nature of the activities.

Step 2: Remove log pile

Selected logs shall be placed within the restoration area to provide cover for small wildlife. Remaining logs may be removed, burned or chipped but any chips shall not be placed within the wetland or Adjacent Upland Resource Area.

Step 3: Planting

The trees shall be planted within the BVW near the Area of Alteration, along the southern and southwestern portions of the existing wet meadow habitat. Species and quantity to be planted include:

Trees

- 3 river birch (*Betula nigra*) (3-4' height or greater)
 - 1 red maple (*Acer rubrum*) (3-4' height or greater)
-
- Precise citing of plants shall be determined by the owner, after consultation with the wetland scientist in the field prior to installation.
 - Tree plantings shall be spaced at 10-15' on center.
 - Each plant will have its roots loosened prior to planting to encourage root growth away from the planting bulb.
 - Leaf litter shall be spread throughout area if available.
 - Plantings shall take place during suitable growing conditions and not before completion of the log and woody debris removal.
 - All plantings shall be watered appropriately during the first growing season, and shall be monitored by the supervising biologist at the end of the first growing season to assess survival and whether replacement plantings are necessary.

- Any plants that do not survive the first growing season shall be replaced prior to the next growing season.

Step 7: Monitoring

- a. **Seasonal monitoring reports** shall be prepared for the restoration area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections, and will include photographs and details about the vitality of the restoration area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the area, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present, monitored and removed.
- b. **At least 90% of the surface area** of the restoration area shall be re-established with indigenous plant species within three growing seasons. If the restoration area does not meet the 90% re-vegetation requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, the desired goals. This plan must include an analysis of why the areas have not successfully re-vegetated and how the Applicant intends to resolve the problem.
- c. There should be an intensive effort to prevent the establishment of non-native invasive plant species, and to ensure timely and consistent treatment (e.g., hand pulling, cutting) of invasive plant species that become established within the BVW and Adjacent Upland Resource Area.

Aubuchon Sudbury MA Garden Center Proposed Product List

- Live Plants - Flowers and Vegetables
Potted plants and Starter trays
- Plastic Planter Pots
- Plastic and Metal Watering cans
- Garden Hoses and Sprinklers
- Bamboo/ Wood Garden Stakes
- Wood Trellis / Plant stakes
- Garden Carts and Wheelbarrows
- Lawn Mowers
- Plastic Lawn Furniture
- Bagged Garden Mulches
- Bagged Potting Soils
- Assorted Plant Foods in Containers with Plastic Wraps
If these are of any concern, they may be kept inside the store.

June 17, 2019

Sudbury Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

Re: 151 & 183 Boston Post Road Notice of Intent (NOI)

Dear Sudbury Conservation Commission:

Goddard Consulting, LLC is pleased to submit this Notice of Intent (NOI) on behalf of the Applicant, The Buddy Dog Humane Society Inc., for the proposed construction of a new animal shelter building, with associated grading, parking lot and stormwater management features located within two adjacent parcels (151 & 183 Boston Post Road). This is a joint filing under the MA Wetlands Protection Act (WPA) and the Sudbury Wetlands Administration Bylaw.

1. Existing Conditions

The site contains an existing animal shelter building and parking lot in the 151 Boston Post Road parcel. The 183 Boston Post Road parcel was recently created from a larger parcel owned by Eversource (formerly Map K10, Lot 14). This undeveloped parcel contains a compacted gravel access driveway and storage pad. It was used by Eversource for material storage. Wetland resources onsite consists of a Bordering Vegetated Wetland system (BVW) delineated in the field with flags series GC1-GC31 and B1-B12. 100-foot Buffer Zone and Adjacent Upland Resource Area (AURA) extends off these BVW flags.

A potential vernal pool interior to the BVW was delineated with pink flags labeled PVP1-PVP20. See the included Wetland Border Report (dated 12/5/18) for additional details about the wetland resource areas. The potential vernal pool was inspected on April 16, 2019 and found to contain four wood frog egg masses, but no other vernal pool indicator species.

According to MassGIS most recent database and the 14th edition of Natural Heritage Atlas (August 1, 2017) the site is not located with an NHESP an Estimated Habitat of Rare Wildlife and/or Priority Habitat of Rare Species, nor are there any mapped certified or potential vernal pools. The site is not within a 100-year flood zone (see attached FEMA Firmette),

The majority of the undeveloped woods and shrubby areas contain non-native invasive species, including glossy false buckthorn, honeysuckle, oriental bittersweet. These species are the dominant understory species in much of the project site.

2. Proposed Conditions

The project consists of the construction of a new animal shelter building, and an addition and modifications to the existing building. Additional work includes paved driveways, parking lot, new septic system, utility connections, walkways, landscaping and a dog run. There will be an increase in impervious area of 10,840 sf. The project has been designed in accordance with the MassDEP Stormwater Standards and the Sudbury Stormwater Bylaw.

Approximately 3,550 sf of natural vegetation within the Buffer Zone/AURA will be permanently altered for construction. As mitigation for this alteration, the project includes a 1:1 mitigation planting area plus an intensive Invasive Species Management Plan (ISMP). The mitigation is detailed in the attached "Habitat Restoration Plan."

3. Compliance Under the MA Wetlands Protection Act (WPA)

The proposed work will occur in Buffer Zone to a vegetated wetland and will fall under standard 310 CMR 10.02(3) of the WPA, which states the following:

"3. Activities within the buffer zone which do not meet the requirements of 310 CMR 10.02(2)(b)1. and 2. are subject to preconstruction review through the filing of a Determination of Applicability to clarify jurisdiction or a Notice of Intent under the provisions of 310 CMR 10.05(4) and 10.53(1)."

This submittal is a Notice of Intent application.

4. Compliance Under the Sudbury Wetland Administration Bylaw

Section 7.2 of the Bylaw Regulations provides performance standards for work within the AURA.

The Character of the Work and Alternatives

The proposed work will improve upon the existing conditions of the site, which is currently in a highly disturbed and degraded state. The installation of native shrubs and removal of invasive species will benefit not only the wildlife but also will improve the water quality and enhance the ability of the resource areas to contribute to the wetlands values protected by the Bylaw. The new stormwater management system will be a great improvement over the existing conditions.

Setting Disturbance Restrictions

The majority of the project will be located outside of the Buffer Zone or located within existing disturbed or degraded habitat. 3,550 sf of natural vegetation will be altered, but this area is not high-quality habitat for wildlife as it is located immediately adjacent to the gravel driveway, and it contains a high density of invasive species. This alteration will be mitigated by the installation

of native shrub plantings and the removal of a significant amount of invasive plant species via the ISMP.

No Significant Adverse Impact of Wildlife Habitat

The proposed activities have been designed to restore and enhance wildlife habitat, particularly for vernal pool-breeding amphibians. Under the current conditions, wildlife habitat is greatly diminished at the site due to the presence of abundant non-native invasive plant species. The enhancement will greatly expand upon the amount of non-breeding forested habitat for the amphibians known to breed in the vernal pool.

5. Documents Submitted for this NOI

Three hard copies of the NOI application are enclosed, and the titles of all the documents enclosed are as follows:

- WPA Form 3 with Wetland Fee Transmittal Form
- Copy of Checks
- Abutter's list
- Notification to Abutters, Affidavit of Service
- *Wetland Border Report*, 12/5/18, Goddard Consulting, LLC (includes USGS & Ortho maps)
- *FEMA FIRMette*
- *Habitat Restoration Plan*, Goddard Consulting, LLC, 6/14/19
- *Stormwater Management Documentation*, Sullivan, Connors & Associates, dated 6/12/19

Please feel free to contact us if you have any questions.

Very truly yours,



Dan Wells
Senior Wetland Scientist and Wildlife Biologist

CC: MassDEP, NERO, 205B Lowell Street, Wilmington, MA 01887



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

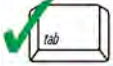
Document Transaction Number

Sudbury

City/Town

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

151 & 183 Boston Post Road

a. Street Address

Sudbury

b. City/Town

01776

c. Zip Code

Latitude and Longitude:

d. Latitude

e. Longitude

Map K11

f. Assessors Map/Plat Number

Parcels 20 & 501

g. Parcel /Lot Number

2. Applicant:

Steve

a. First Name

Burt

b. Last Name

Buddy Dog Humane Society, Inc.

c. Organization

151 Boston Post Road

d. Street Address

Sudbury

e. City/Town

MA

f. State

01776

g. Zip Code

781-235-4120

h. Phone Number

i. Fax Number

srburtt@comcast.net

j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Dan

a. First Name

Wells

b. Last Name

Goddard Consulting, LLC

c. Company

291 Main Street, Suite 8

d. Street Address

Northborough

e. City/Town

MA

f. State

01532

g. Zip Code

508-393-3784

h. Phone Number

i. Fax Number

dan@goddardconsultingllc.com

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$1,050

a. Total Fee Paid

\$512.50

b. State Fee Paid

\$537.50

c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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A. General Information (continued)

6. General Project Description:

Construction of new animal shelter building, with associated grading, parking lot and stormwater management features.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex South	
a. County	b. Certificate # (if registered land)
12648 / 70356	428 / 327
c. Book	d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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MassDEP File Number

Document Transaction Number

Sudbury
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
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5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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Document Transaction Number

Sudbury
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet _____ 2. cubic yards dredged _____	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. <input type="checkbox"/> Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____

	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	1. linear feet _____	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet _____	
h. <input type="checkbox"/> Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet _____ 2. cubic yards dredged _____	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet _____	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged _____	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet _____	

4. Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

_____ a. square feet of BVW

_____ b. square feet of Salt Marsh

5. Project Involves Stream Crossings

_____ a. number of new stream crossings

_____ b. number of replacement stream crossings



Massachusetts Department of Environmental Protection
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C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- 1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

**Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581**

2017 _____
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

c. Submit Supplemental Information for Endangered Species Review*

- 1. Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
- 2. Assessor's Map or right-of-way plan of site

- 2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to “Commonwealth of Massachusetts - NHESP” and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
 2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____
 3. Separate MESA review completed.
Include copy of NHESP “no Take” determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP’s Boston Office. For coastal towns in the Southeast Region, please contact MassDEP’s Southeast Regional Office.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Sudbury
City/Town

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

C. Other Applicable Standards and Requirements (cont'd)

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
 a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
 b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
 a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
 a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
 a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
 1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
 b. No. Check why the project is exempt:
 1. Single-family house
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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Sudbury
City/Town

D. Additional Information (cont'd)

3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. List the titles and dates for all plans and other materials submitted with this NOI.

Proposed Site Plan of 183 Boston Post Road

a. Plan Title

Sullivan, Connors and Associates

Vito Colonna

b. Prepared By

c. Signed and Stamped by

June 12, 2019

1"=30'

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. Attach NOI Wetland Fee Transmittal Form

9. Attach Stormwater Report, if needed.

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

29574

2. Municipal Check Number

5/27/19

3. Check date

29572

4. State Check Number

5/27/19

5. Check date

Buddy Dog Humane Society

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Sudbury
City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

151 & 183 Boston Post Road

a. Street Address

29572

c. Check number

Sudbury

b. City/Town

\$512.50

d. Fee amount

2. Applicant Mailing Address:

Steve

a. First Name

Buddy Dog Humane Society, Inc.

c. Organization

151 Boston Post Road

d. Mailing Address

Sudbury

e. City/Town

781-235-4120

h. Phone Number

i. Fax Number

MA

f. State

01776

g. Zip Code

srburtt@comcast.net

j. Email Address

3. Property Owner (if different):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
3b. Construction of new commercial building and associated activities.	1	\$1,050	\$1,050
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Step 5/Total Project Fee: \$1,050

Step 6/Fee Payments:

Total Project Fee:	<u>\$1,050</u>
	a. Total Fee from Step 5
State share of filing Fee:	<u>\$512.50</u>
	b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:	<u>\$537.50</u>
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters	abutters_town	abutters_state	abutters_zip	abutters_book	abutters_location
K10-0014	NSTAR ELECTRIC COMPANY	PROPERTY TAX DEPARTMENT	P.O. BOX 270		HARTFORD	CT	06141	7734-426	183 BOSTON POST RD
K10-0053	KIM DAL YONG & JUNG HEE		7 GOODMANS HILL RD		SUDBURY	MA	01776	64447-573	7 GOODMANS HILL RD
K10-0402	FRYKLUND G E & L M TRS		29 GOODMANS HILL RD		SUDBURY	MA	01776	29088-149	29 GOODMANS HILL RD
K10-0403	GULAHMADZADEH GULAHMAD		33 GOODMANS HILL RD		SUDBURY	MA	01776	72204-578	33 GOODMANS HILL RD
K10-0405	BALZOTTI CAESAR J		P O BOX 347		WAKEFIELD	MA	01880	16276-67	BOSTON POST RD
K11-0002	REALTY INCOME CORP	ATTN: PM# 0996	11995 EL CAMINO REAL		SAN DIEGO	CA	92130	29194-248	150 BOSTON POST RD
K11-0019	RICHARD J BOSSE HOLDINGS LLC		141 BOSTON POST RD		SUDBURY	MA	01776	1250-85	141 BOSTON POST RD
K11-0020	BUDDY DOG		151 BOSTON POST RD		SUDBURY	MA	01776	N-A	151 BOSTON POST RD
K11-0402	NSTAR ELECTRIC COMPANY	PROPERTY TAX DEPT.	P.O. BOX 270		HARTFORD	CT	06141	7734-426	163 BOSTON POST RD
K11-0019-A	RICHARD J BOSSE HOLDINGS LLC		141 BOSTON POST RD		SUDBURY	MA	01776	1250-85	0 BOSTON POST RD
K11-5000	MASS BAY TRANSPORTATION		10 PARK PLAZA		BOSTON	MA	02116	11317-113	RAILWAY
K10-0404	TOWN OF SUDBURY	TREASURER	278 OLD SUDBURY ROAD		SUDBURY	MA	01776	18839-313	BOSTON POST RD
K10-0081	CCC POST ROAD LLC		34 WASHINGTON ST		BRIGHTON	MA	02135	71818-338	187 BOSTON POST RD
K10-0012	CCC POST ROAD LIMITED PTNRSHIP	C/O THE COOLIDGE	189 BOSTON POST RD		SUDBURY	MA	01776	61918-178	189 BOSTON POST RD
K10-0016	LACAVA LISA A		174 BOSTON POST RD		SUDBURY	MA	01776	27115-330	174 BOSTON POST RD

Notification to Abutters Under the
Massachusetts Wetlands Protection Act and
the Town of Sudbury Wetlands Administration Bylaw

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Town of Sudbury Wetlands Administration Bylaw you are hereby notified of the following:

The Applicant: Steve Burt, Buddy Dog Humane Society, Inc.

Address: 151 Boston Post Road, Sudbury, MA 01776

Phone: 781-235-4120

Has filed a Notice of Intent with the **Sudbury Conservation Commission** seeking permission to remove, fill, dredge, or alter an Area Subject to Protection under the Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw.

Applicant's Representative: Dan Wells, Goddard Consulting LLC.

Address: 291 Main Street, Suite 8, Northborough, MA 01532 Phone: (508) 393-3784

The address of the property where the activity is proposed: 151 & 183 Boston Post Road, Sudbury, MA.

Town Atlas Plat/Map: K11

Parcel/Lot: 20 & 501

Project description: Construction of new animal shelter building, with associated grading, parking lot and stormwater management features.

Copies of the Notice of Intent may be examined at the **Conservation Office, Department of Public Works Building, 275 Old Lancaster Road, Sudbury** between the hours of **9:00am to 2:00pm Monday through Wednesday, 10:00am to 4:00pm on Thursdays, and 9:00am to 2:00pm on Fridays.** For more information, please call the Conservation office at **(978) 440-5471** or email at concom@sudbury.ma.us.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the **Sudbury Town Crier**.

NOTE: Notice of the public hearing, including the date, time, and place, will be posted in the Dept. of Public Works Building not less than forty-eight (48) hours in advance.

NOTE: You may also contact your local conservation commission or the nearest Department of Environmental Protection Regional Office* for the information about this application or, the Wetlands Protection Act. Sudbury is in the Northeast Region of DEP. To contact DEP, call:

***DEP Northeast Region: (978) 694-3200
205B Lowell Street, Wilmington, MA 01887**

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and
the Town of Sudbury Wetlands Administration Bylaw

I, Dan Wells hereby certify under the pains and penalties of perjury that on June 17, 2019 I gave notification to abutters in Compliance with the second paragraph of Massachusetts General Law Chapter 131, Section 40, and the DEP Guide to Abutter Notification dating April 8, 1994 in connection with the following matter:

A Notice of Intent was filed under the Massachusetts Wetlands Protection Act and the Sudbury Wetlands Administration Bylaw by Steve Burt, Buddy Dog Humane Society, Inc. with the Sudbury Conservation Commission on June 17, 2019 for a property located at 151 & 183 Boston Post Road in Sudbury, MA.

The form of the notification, and the list of abutters to whom it was given, and their addresses, are attached to this Affidavit of Service.



(Name)

June 17, 2019

(Date)

December 5, 2018

Stephen Burt
P.O. Box 296
Sudbury, MA 01776

**Re: Wetland Border Report
151 & 183 Boston Post Road - Sudbury, MA**

Dear Mr. Burt:

On February 3, 2017 and November 13, 2018, the wetland resources were delineated in portions of two parcels known as 151 & 183 Boston Post Road in Sudbury, MA (Parcels K11-20 & K10-14) (see attached Orthophoto and USGS maps). The wetland border was flagged using the criteria in the most recent edition of the MA Wetlands Protection Act (WPA) and Regulations (310 CMR 10.00 et al.) and the Sudbury Wetlands Administration Bylaw and Regulations. Hydric soil indicators, vegetational changes, hydrological indicators, and topography were all considered for delineation purposes. Delineated wetland resource areas include Bordering Vegetated Wetland (BVW) and estimated Mean Annual High Water of a potential vernal pool (PVP).

BVW was delineated with blue flags labeled #GC1 through GC31 and B1-B12. Flag #GC10 was documented using the attached MA DEP BVW datasheets. Estimated Mean Annual High Water (MAHW) of a PVP interior to the BVW was delineated with pink flags labeled PVP1-PVP20.

According to Mass GIS Data Layers for NHESP, the site is not located within an Estimated Habitat of Rare Wildlife and Priority Habitat of Rare Species. There are no mapped potential or certified vernal pools within the property, although a PVP was delineated as described above. There is no FEMA 100-year floodplain mapped within the property.

Any work within 100 feet of the delineated BVW and/or PVP requires a Request for Determination of Applicability (RDA) or Notice of Intent (NOI) be filed with the Sudbury Conservation Commission.

Please feel free to contact us if you have any questions.

Very truly yours,




Dan Wells, M.S.
Senior Wildlife Biologist and Wetland Scientist



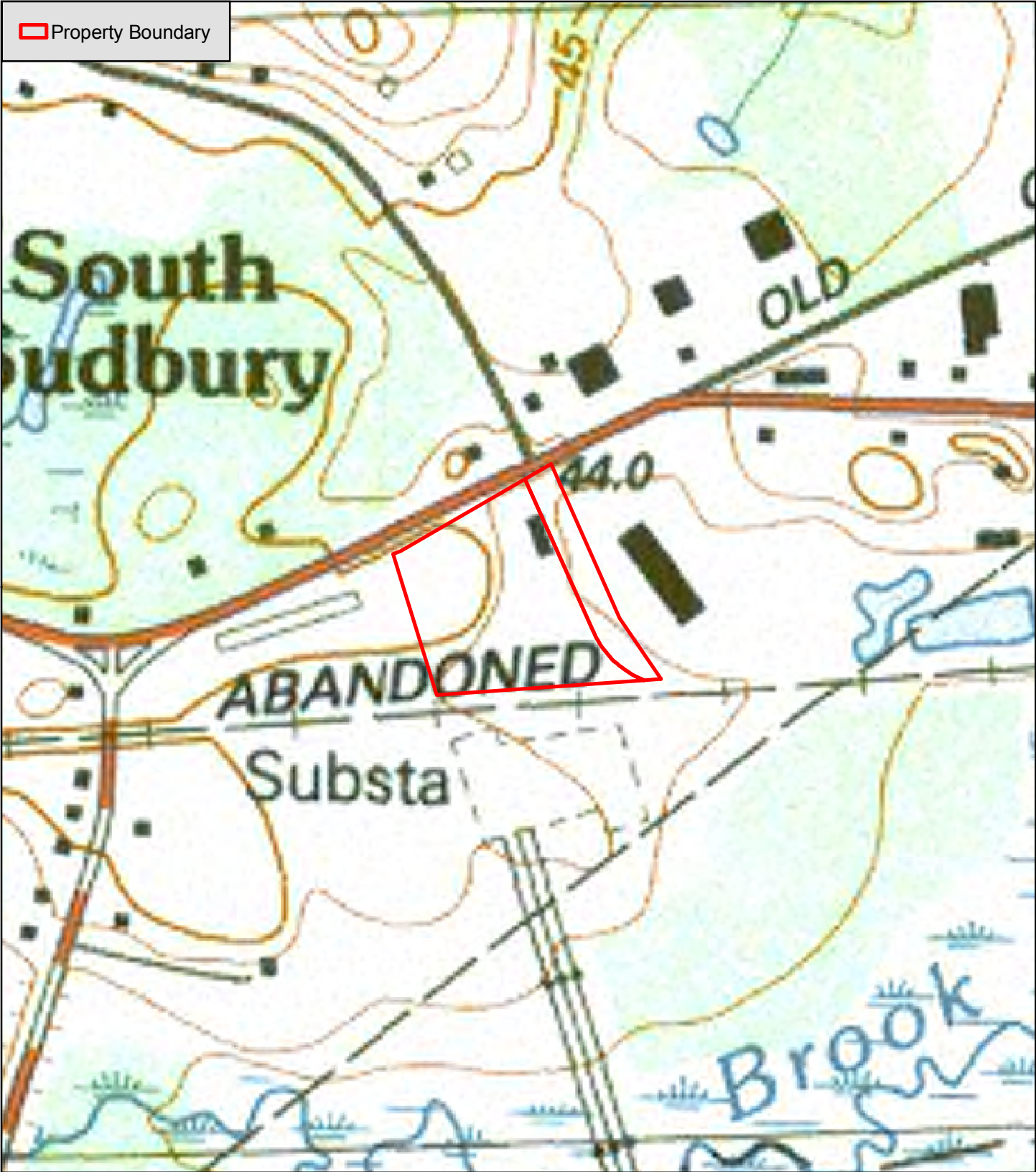
Orthophoto View of Site

151 & 183 Boston Post Road - Sudbury, MA

 0 50 100 200 Feet
1 inch = 200 feet
Date: 12/5/2018

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts Information Technology Division"





USGS Site Locus

151 & 183 Boston Post Road - Sudbury, MA

N
0 100 200 400 Feet
1 inch = 400 feet
Date: 12/5/2018

GIS Data Source: "Office of Geographic Information (MassGIS), Commonwealth of Massachusetts Information Technology Division"



DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____

 Prepared by: Goddard Consulting

 Project location: 183 Boston Post Road

DEP File #: _____

Check all that apply:

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only |
| <input checked="" type="checkbox"/> | Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II |
| <input type="checkbox"/> | Method other than dominance test used (attach additional information) |

Section I. Vegetation	Observation Plot Number: GC 10	Transect Number: Upgradient	Date of Delineation: 3-Feb-17		
Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
<u>Tree Layer</u>					
Red maple	<i>Acer rubrum</i>	20%	25.0%	Yes	FAC*
Eastern white pine	<i>Pinus strobus</i>	60%	75.0%	Yes	FACU
<u>Sapling Layer</u>					
Red oak	<i>Quercus rubra</i>	3%	100.0%	Yes	FACU
<u>Shrub Layer</u>					
Glossy false buckthorn	<i>Frangula alnus</i>	10%	100.0%	Yes	FAC*
<u>Climbing Woody Vine</u>					
none					
<u>Ground Cover</u>					
none					
Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth					
Morphological Adaptations: 0		Description:			
* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.					
Vegetation conclusion:					
Number of dominant wetland indicator plants: 2			Number of dominant non-wetland indicator plants: 2		
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes					

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? yes no

title/date: Interim Soil Survey of Middlesex County - 1991 (Maps - 1989)

map number: _____

soil type mapped: Udorthents - Urban land complex

hydric soil inclusions: Scio

Are field observations consistent with soil survey? yes no

Remarks: _____

2. Soil Description

<u>Horizon</u>	<u>Depth (inches)</u>	<u>Matrix Color</u>	<u>Mottles Color or Texture</u>
A	0-2	10YR 2/2	sandy loam
B	2-12+	10YR 3/3	sand

Remarks: _____

3. Other: _____

Conclusion: Is soil hydric? yes no

Other Indicators of Hydrology: (check all that apply and describe)

- Site inundated: _____
- Depth to free water in observation hole: _____
- Depth to soil saturation in observation hole: _____
- Water marks: _____
- Drift Lines: _____
- Sediment deposits: _____
- Drainage patterns in BVW: _____
- Oxidized rhizospheres: _____
- Water-stained leaves: _____
- Recorded data (stream, lake, or tidal gauge; aerial photo; other):

- Other: _____

Vegetation and Hydrology Conclusion for Upgradient of GC 10		
	<u>yes</u>	<u>no</u>
Number of wetland indicator plants		
>= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present		X
other indicators of hydrology present		X
Sample location is in a BVW		X

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____

 Prepared by: Goddard Consulting

 Project location: 183 Boston Post Road

DEP File #: _____

Check all that apply:

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only |
| <input checked="" type="checkbox"/> | Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II |
| <input type="checkbox"/> | Method other than dominance test used (attach additional information) |

Section I. Vegetation		Observation Plot Number: GC 10	Transect Number: Downgradient	Date of Delineation: 3-Feb-17	
Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
<u>Tree Layer</u>					
Red maple	<i>Acer rubrum</i>	70%	100.0%	yes	FAC*
<u>Sapling Layer</u>					
Red maple	<i>Acer rubrum</i>	5%	100.0%	yes	FAC*
<u>Shrub Layer</u>					
Glossy false buckthorn	<i>Frangula alnus</i>	20%	100.0%	yes	FAC*
<u>Climbing Woody Vine</u>					
none					
<u>Ground Cover</u>					
none					
Remarks: * An asterisk after common plant name indicates stunted growth; ** indicates extremely stunted growth					
Morphological Adaptations: 0		Description:			
* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FACW, or OBL.					
Vegetation conclusion:					
Number of dominant wetland indicator plants: 3			Number of dominant non-wetland indicator plants: 0		
Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes					

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? yes no

title/date: Interim Soil Survey of Middlesex County - 1991 (Maps - 1989)

map number: _____

soil type mapped: Birdsall mucky silt loam, 0 to 1 percent slopes

hydric soil inclusions: _____

Are field observations consistent with soil survey? yes no

Remarks: _____

2. Soil Description

<u>Horizon</u>	<u>Depth (inches)</u>	<u>Matrix Color</u>	<u>Mottles Color or Texture</u>
A	0-3	10YR 2/2	10YR 4/6 redox
B	3-13	10YR 3/2	sand; 10YR 4/6 redox

Remarks: _____

3. Other: _____

Conclusion: Is soil hydric? yes no

Other Indicators of Hydrology: (check all that apply and describe)

- Site inundated: _____
- Depth to free water in observation hole: _____
- Depth to soil saturation in observation hole: _____
- Water marks: _____
- Drift Lines: _____
- Sediment deposits: _____
- Drainage patterns in BVW: _____
- Oxidized rhizospheres: _____
- Water-stained leaves: _____
- Recorded data (stream, lake, or tidal gauge; aerial photo; other):

- Other: _____

Vegetation and Hydrology Conclusion for Downgradient of GC 10		
	<u>yes</u>	<u>no</u>
Number of wetland indicator plants		
>= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present		X
Sample location is in a BVW		X

Submit this form with the Request for Determination of Applicability or Notice of Intent

National Flood Hazard Layer FIRMette



42°21'54.28"N



42°21'27.70"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE)
<i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/13/2019 at 5:39:55 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

71°23'43.22"W

June 14, 2019

Habitat Restoration Plan

Buddy Dog Humane Society
151 & 183 Boston Post Road
Sudbury, MA

Submitted to:

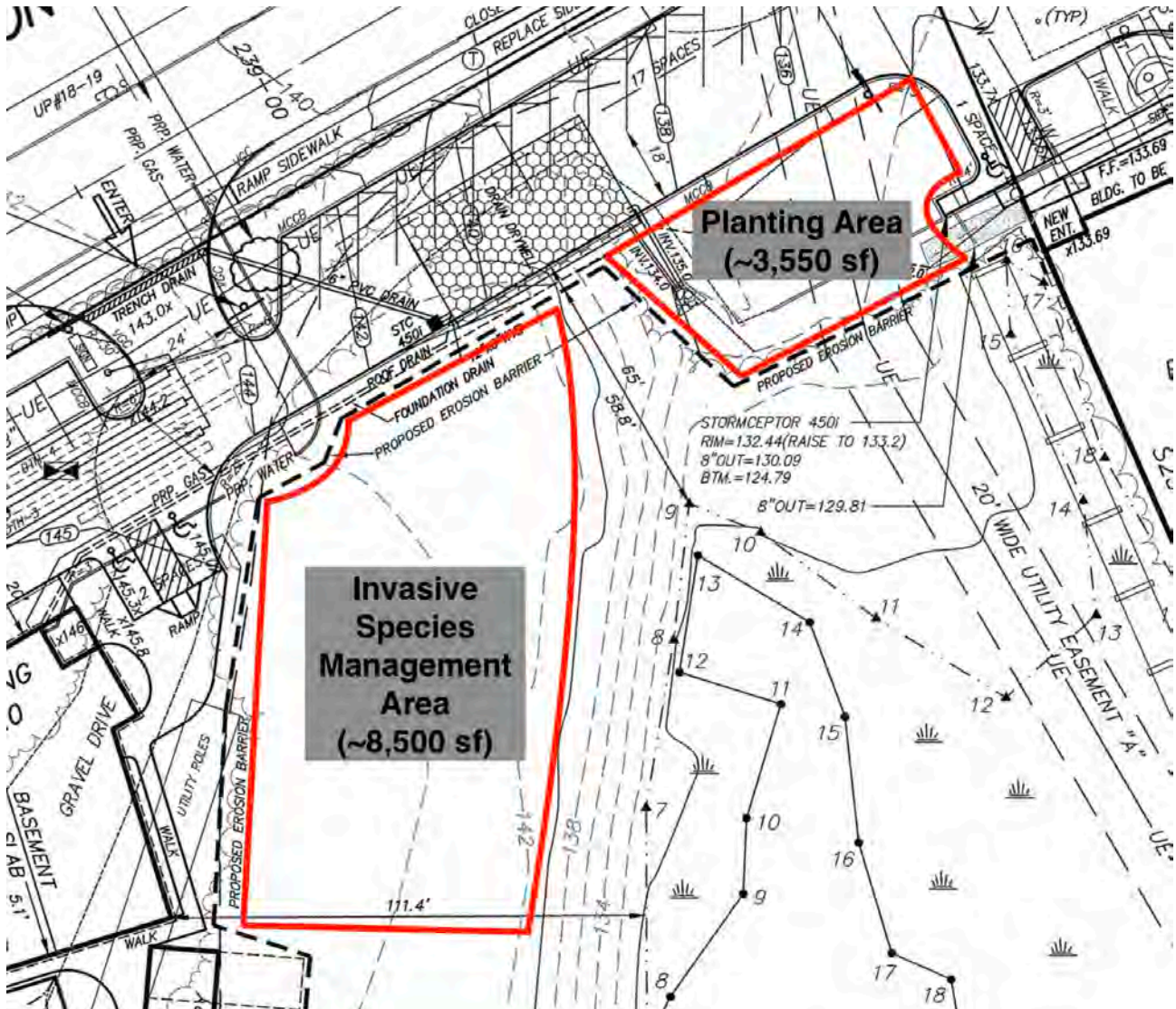
Sudbury Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

Prepared for:

Steve Burt
Buddy Dog Humane Society, Inc.
151 Boston Post Road
Sudbury, MA 01776

1. INTRODUCTION

On behalf of the Applicant, Buddy Dog Humane Society, Goddard Consulting, LLC is pleased to submit this Habitat Restoration Plan as a component of the Notice of Intent filed for 151 & 183 Boston Post Road in Sudbury, MA. Restoration is proposed to the north and west of a Vernal Pool, in order to mitigate for the proposed alteration of 3,550 sf of natural vegetation for the project. See the following figure for a visual plan of the planting locations and locations of invasive species to be removed.



2. RESTORATION PLAN SUMMARY

2.1 Habitat Restoration Area Location

This includes a 3,550 sf planting area to the immediate northwest of the existing building, and an approximately 9,000 sf invasive species management area to the east of the new building.

2.2 Habitat Restoration Plan Components

The plan includes invasive species removal and native shrub plantings.

3. RESTORATION PLAN DETAILS

3.1 Overview

Supervision: All work within the restoration area shall be supervised by a qualified wetland scientist or biologist with a minimum of five years' experience. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

Timing: Invasive species removal may take place during any time of year. Restoration area plantings should be installed during the Spring or Fall growing seasons.

3.2. Sequencing of Procedures

Step 1: Stake Limits of Work & Install ECB

Flag out limits of work for invasive species removal area. Erosion control barriers shall be installed in the form of staked siltation fence and mulch sock (or similar invasive-free barrier) placed at the limit of work for the planting area. These will remain in place and be maintained until the areas are completely stabilized and then may be removed after approval of the Conservation Commission. The supervising wetland scientist shall have authority to require additional erosion control measures if deemed necessary.

Step 2: Identify invasive species for removal

The wetland scientist shall identify and flag (with pink flagging) a representative sample of any non-native invasive species to be removed. Scientist shall provide identification training to removal contractor and laborers if necessary.

Step 3: Remove invasive species

All invasive species specimens shall be removed and discarded in accordance with the following species-specific procedures:

Glossy false buckthorn and honeysuckle: hand-pull individual plants so that entire root system is removed. Chip or burn, taking care not to spread any berries beyond already-contaminated areas. If roots cannot be removed, cut as close to ground as possible to impede growth of stump sprouts the following growing season.

Oriental bittersweet: cut vines from living trees, attempt to pull out individual vines at the roots. Chip or burn removed pieces, taking care not to spread berries beyond already-contaminated area.

Step 4: Planting

The supervising wetland scientist shall direct the placement of shrubs during installation, but they should be generally distributed evenly throughout the area. Suggested species and actual quantity to be planted include:

Shrubs

- 10 American hazelnut (*Corylus americana*) (18"-24" height)
- 10 serviceberry (*Amelanchier canadensis/arborea*) (2-3' height)
- 10 alternate-leaf dogwood (*Cornus alternifolia*) (2-3' height)
- 10 highbush blueberry (*Vaccinium angustifolium*) (2-3' height)

Note: If any of the above species are unavailable at the time of installation, native species from the list on the Conservation Commission's website may be substituted. All installed plants must be non-cultivars.

Seed Mix

- 6 lbs. New England Wetland Plants New England Conservation/Wildlife Mix or equivalent (25 lbs/acre) applied to newly planted portions
- Precise citing of plants may be determined by the wetland scientist in the field prior to installation.
- All plantings shall be distributed randomly throughout the area; trees spaced at 10-15' on center.
- Each plant will have its roots loosened prior to planting to encourage root growth away from the planting bulb.
- Leaf litter shall be spread throughout area if available. Seed mix shall be scattered evenly by hand throughout the restoration area.
- Plantings shall take place during suitable growing conditions and not before completion of the site grading and invasive plant species removal.
- All plantings shall be watered appropriately during the first growing season, and shall be monitored by the supervising biologist at the end of the first growing season to assess survival and whether replacement plantings are necessary.

- Any plants that do not survive the first growing season shall be replaced prior to the next growing season.

Step 7: Monitoring

a. **Seasonal monitoring reports** shall be prepared for the restoration area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections, and will include photographs and details about the vitality of the restoration area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the area, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present, monitored and removed.

b. **At least 90% of the surface area** of the restoration area shall be re-established with indigenous plant species within three growing seasons. If the restoration area does not meet the 90% re-vegetation requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, the desired goals. This plan must include an analysis of why the areas have not successfully re-vegetated and how the Applicant intends to resolve the problem.

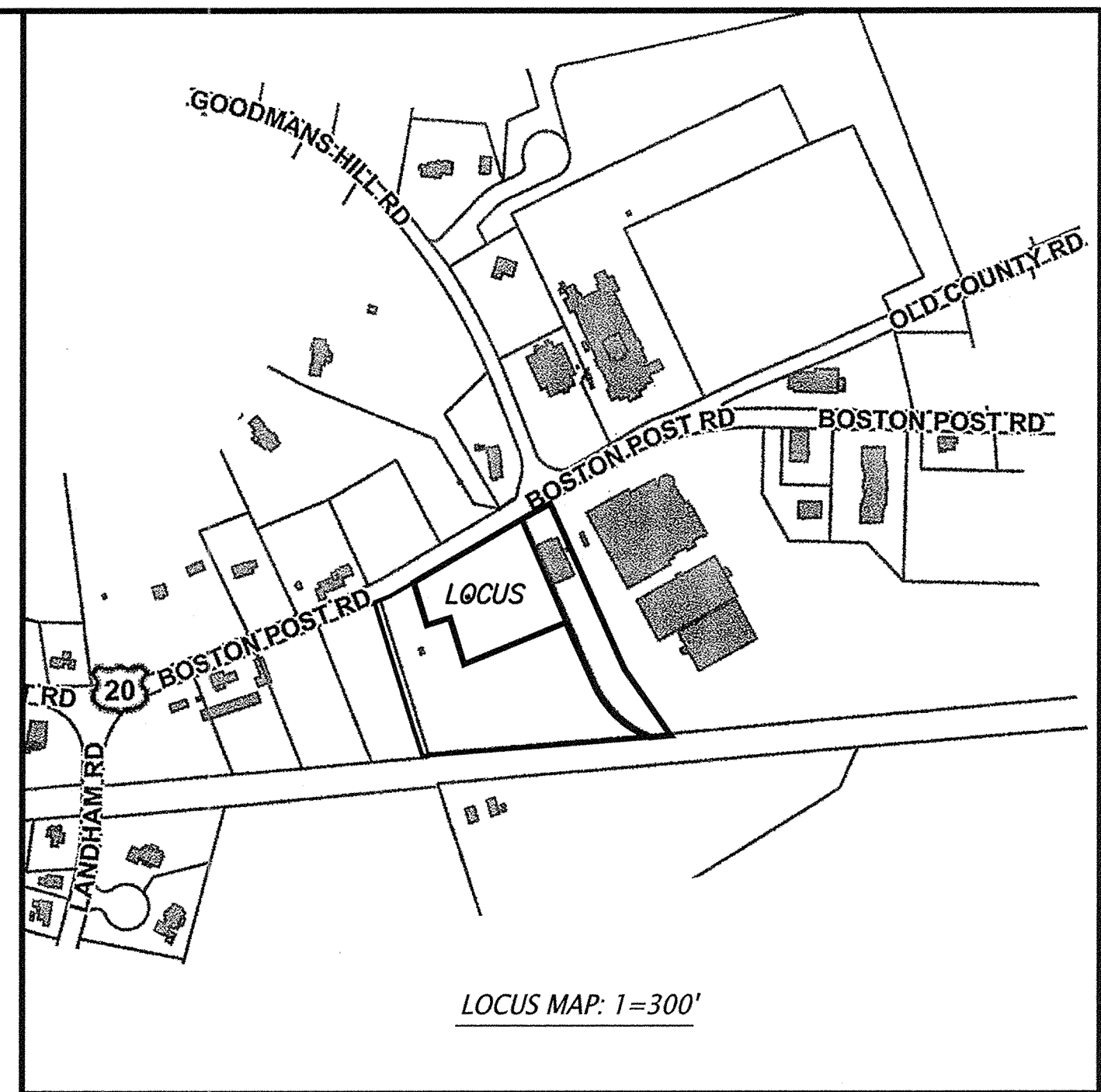
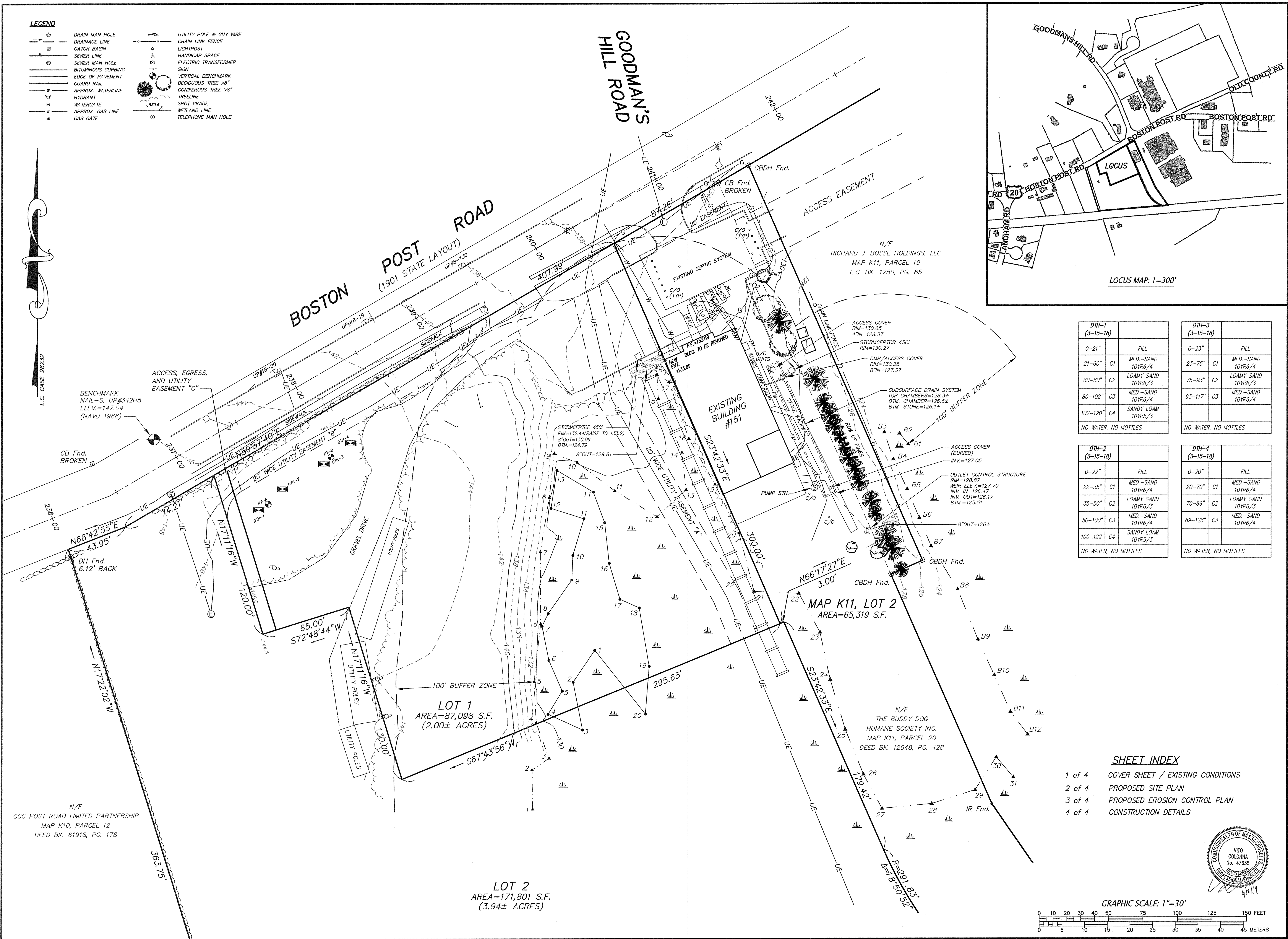
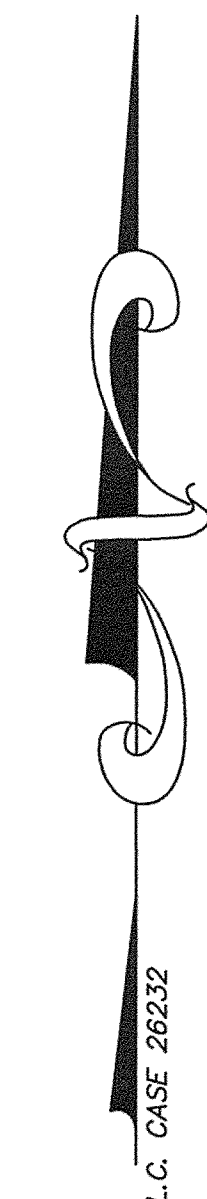
c. There should be an intensive effort to prevent the establishment of non-native invasive plant species, and to ensure timely and consistent treatment (e.g., hand pulling, cutting) of invasive plant species that become established within the Restoration Area.

Step 8: Erosion Controls Removal

Once the restoration area is stable and plantings are complete, a request shall be submitted to the Conservation Commission to remove the erosion controls.

LEGEND

	DRAIN MAN HOLE		UTILITY POLE & GUY WIRE
	DRAINAGE LINE		CHAIN LINK FENCE
	CATCH BASIN		LIGHTPOST
	SEWER LINE		HANDICAP SPACE
	SEWER MAN HOLE		ELECTRIC TRANSFORMER SIGN
	BITUMINOUS CURBING		VERTICAL BENCHMARK SIGN
	EDGE OF PAVEMENT		DECIDUOUS TREE >8"
	GUARD RAIL		CONIFEROUS TREE >8"
	APPROX. WATERLINE		TREELINE
	HYDRANT		SPOT GRADE
	WATERGATE		WETLAND LINE
	APPROX. GAS LINE		TELEPHONE MAN HOLE
	GAS GATE		



GENERAL NOTES:

- OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN OF SUDBURY ASSESSORS RECORDS.
- THIS PLAN IS BASED ON AN ON-THE-GROUND SURVEY BY SULLIVAN CONNORS AND ASSOCIATES PERFORMED ON FEBRUARY 8, 2017.
- LEGAL STATUS OF EASEMENTS AND WAYS, NOT DETERMINED BY THIS SURVEY.
- WETLANDS SHOWN HEREON WERE FLAGGED BY GODDARD CONSULTING INC. AND LOCATED ON-THE-GROUND BY SULLIVAN CONNORS AND ASSOCIATES.

TOWN ASSESSOR MAP K10, PARCEL 14
TOWN ASSESSOR MAP K11, PARCEL 20
DEED BOOK 7734, PAGE 426

PLAN NUMBER 1251 OF 1949
PLAN NUMBER 1212 OF 1998
PLAN NUMBER 590 OF 1974
PLAN NUMBER 453 OF 1992
L.C. PLAN 26232-A, B
BOSTON POST ROAD 1901 STATE LAYOUT
BOSTON POST ROAD 1969 ALTERATION

ZONED: INDUSTRIAL
AREA = N/A sf
FRONTAGE = 50 feet
SETBACKS: FRONT = 20 feet
 = 50 feet Boston Post Rd.
 = 50 feet
 SIDE = 30 feet
 REAR = 30 feet

DTH-1 (3-15-18)		DTH-3 (3-15-18)	
0-21"	FILL	0-23"	FILL
21-60"	C1 MED.-SAND 10YR6/4	23-75"	C1 MED.-SAND 10YR6/4
60-80"	C2 LOAMY SAND 10YR6/3	75-93"	C2 LOAMY SAND 10YR6/3
80-102"	C3 MED.-SAND 10YR6/4	93-117"	C3 MED.-SAND 10YR6/4
102-120"	C4 SANDY LOAM 10YR5/3		
NO WATER, NO MOTILES		NO WATER, NO MOTILES	

DTH-2 (3-15-18)		DTH-4 (3-15-18)	
0-22"	FILL	0-20"	FILL
22-35"	C1 MED.-SAND 10YR6/4	20-70"	C1 MED.-SAND 10YR6/4
35-50"	C2 LOAMY SAND 10YR6/3	70-89"	C2 LOAMY SAND 10YR6/3
50-100"	C3 MED.-SAND 10YR6/4	89-128"	C3 MED.-SAND 10YR6/4
100-122"	C4 SANDY LOAM 10YR5/3		
NO WATER, NO MOTILES		NO WATER, NO MOTILES	

APPROVED BY:
SUDBURY PLANNING BOARD

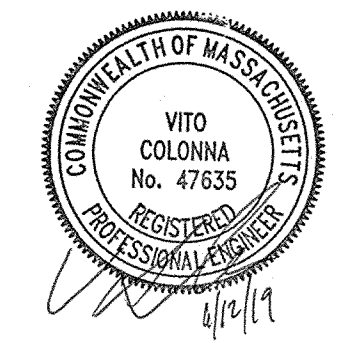
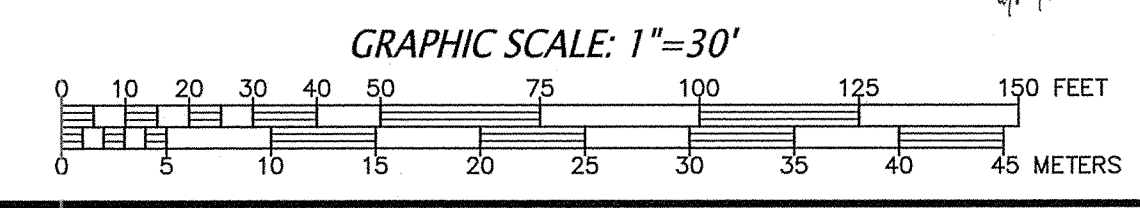
DATE: _____

PREPARED FOR:
THE BUDDY DOG HUMANE SOCIETY INC.
151 BOSTON POST ROAD
SUDBURY, MA 01776

SULLIVAN, CONNORS AND ASSOCIATES
LAND SURVEYING AND CIVIL ENGINEERING
121 BOSTON POST ROAD
SUDBURY, MASSACHUSETTS 01776
PHONE: 978-443-9566 FAX: 978-443-8915

PROJECT:
PROPOSED SITE PLAN OF 183 BOSTON POST ROAD IN SUDBURY, MASS.

- SHEET INDEX**
- 1 of 4 COVER SHEET / EXISTING CONDITIONS
 - 2 of 4 PROPOSED SITE PLAN
 - 3 of 4 PROPOSED EROSION CONTROL PLAN
 - 4 of 4 CONSTRUCTION DETAILS



N/F
CCC POST ROAD LIMITED PARTNERSHIP
MAP K10, PARCEL 12
DEED BK. 61918, PG. 178

LOT 1
AREA=87,098 S.F.
(2.00± ACRES)

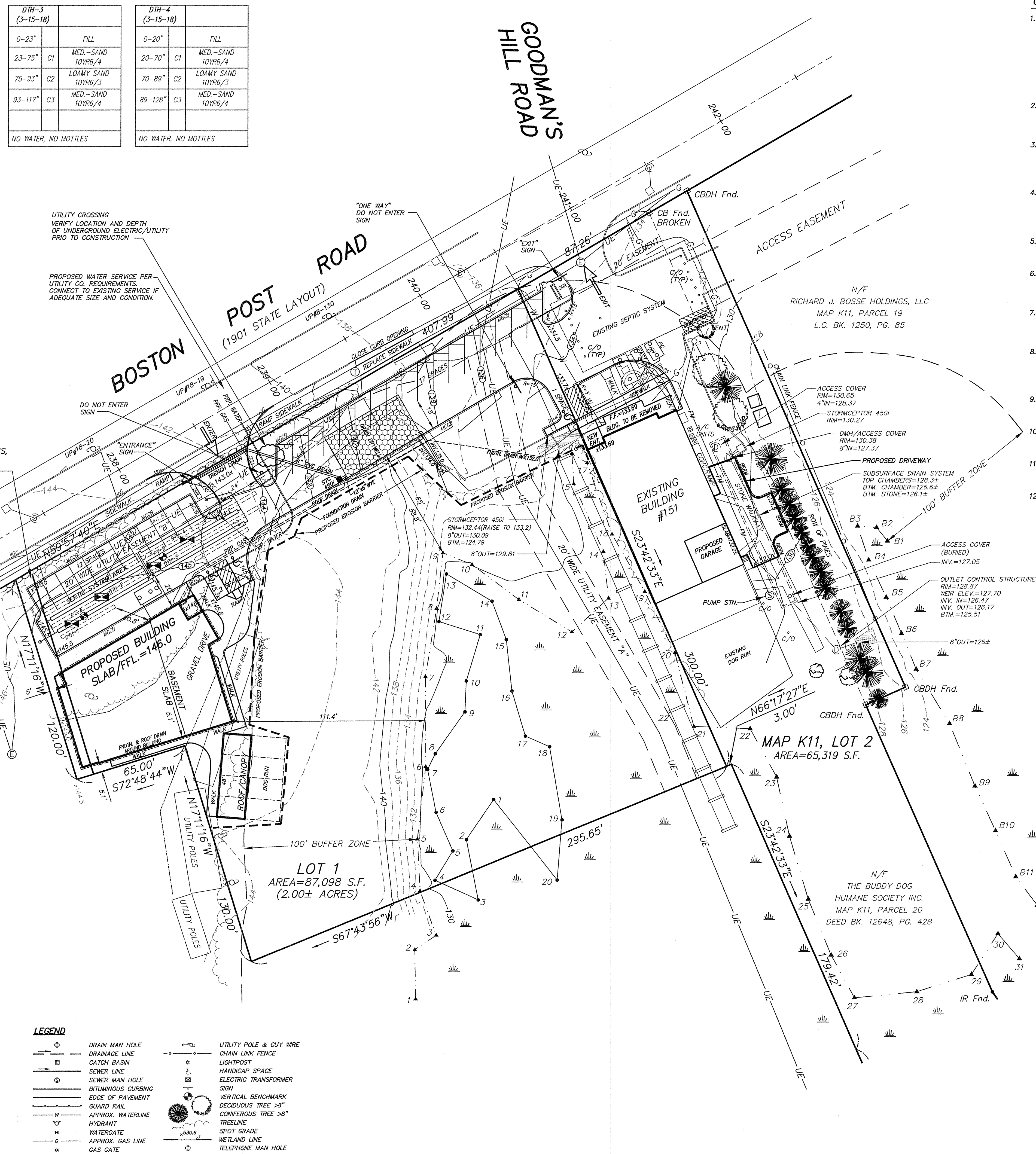
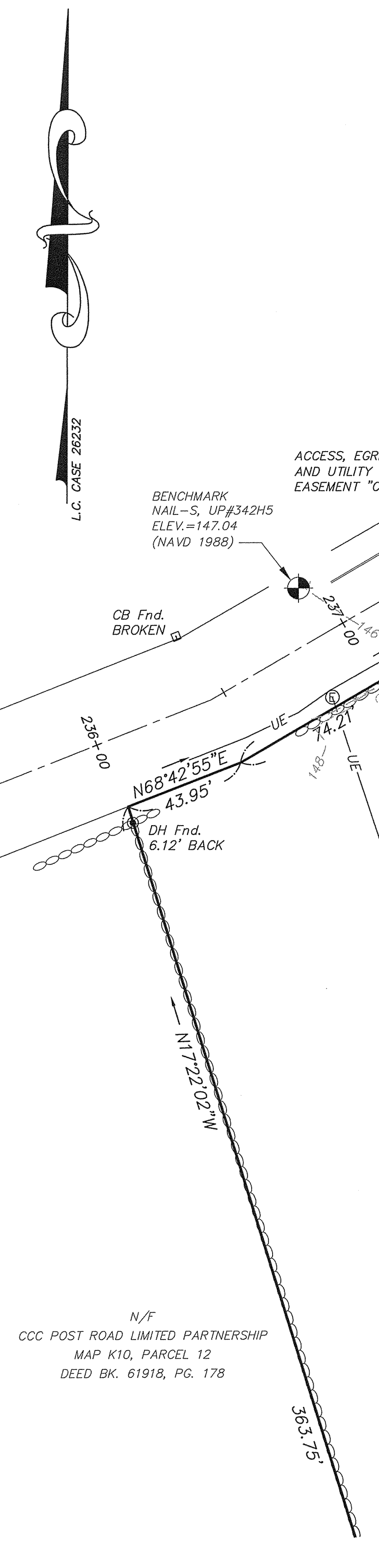
LOT 2
AREA=171,801 S.F.
(3.94± ACRES)

MAP K11, LOT 2
AREA=65,319 S.F.

N/F
THE BUDDY DOG
HUMANE SOCIETY INC.
MAP K11, PARCEL 20
DEED BK. 12648, PG. 428

REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2019	
EXISTING CONDITIONS PLAN	
SCALE: 1"=30'	SHEET 1 OF 5.

DTH-1 (3-15-18)		DTH-2 (3-15-18)		DTH-3 (3-15-18)		DTH-4 (3-15-18)	
0-21"	FILL	0-22"	FILL	0-23"	FILL	0-20"	FILL
21-60" C1	MED.-SAND 10YR6/4	22-35" C1	MED.-SAND 10YR6/4	23-75" C1	MED.-SAND 10YR6/4	20-70" C1	MED.-SAND 10YR6/4
60-80" C2	LOAMY SAND 10YR6/3	35-50" C2	LOAMY SAND 10YR6/3	75-93" C2	LOAMY SAND 10YR6/3	70-89" C2	LOAMY SAND 10YR6/3
80-102" C3	MED.-SAND 10YR6/4	50-100" C3	MED.-SAND 10YR6/4	93-117" C3	MED.-SAND 10YR6/4	89-128" C3	MED.-SAND 10YR6/4
102-120" C4	SANDY LOAM 10YR5/3	100-122" C4	SANDY LOAM 10YR5/3				
NO WATER, NO MOTILES		NO WATER, NO MOTILES		NO WATER, NO MOTILES		NO WATER, NO MOTILES	



CONSTRUCTION NOTES:

- EXISTING UTILITY LINES SHOWN ON THIS DRAWING ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THE ENGINEER DOES NOT GUARANTEE THEIR ACCURACY OR THAT ALL UTILITIES AND SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERT ELEVATIONS OF THE UTILITIES AND STRUCTURES, AS REQUIRED PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES WITH RECORD DATA SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL CONTACT DIG SAFE: 1-800-344-7233 (72 HOURS BEFORE DIGGING), AND TOWN DPW FOR UTILITY LOCATIONS PRIOR TO EXCAVATION. TEST PITS SHALL BE UTILIZED FOR UTILITY CONNECTIONS.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL BE IN CONFORMANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE SUDBURY DEPARTMENT OF PUBLIC WORKS, OR THE LATEST EDITION OF THE MASSACHUSETTS HIGHWAY DEPARTMENT (MHD) CONSTRUCTION STANDARDS AND THE MHD STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, WHICHEVER IS MORE STRINGENT.
- THE WATER SYSTEM SHALL BE INSTALLED IN COMPLIANCE WITH THE TOWN OF SUDBURY DPW WATER DIVISION RULES AND REGULATIONS. CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE PERMITS (TO BE OBTAINED BY THE CONTRACTOR). CONNECTION LOCATION AND SIZE TO BE CONFIRMED WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, TO KEEP ACCURATE AS-BUILT MEASUREMENTS / RECORDS OF ALL UNDERGROUND OR CONCEALED WORK.
- THE LAYOUT AND INSTALLATION OF ELECTRIC, GAS, TELEPHONE AND CATV UTILITY CONNECTIONS AND SERVICES SHALL IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITY. CONNECTION LOCATION AND SIZE TO BE CONFIRMED WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL UTILIZE ALL MEASURES AND MATERIALS NECESSARY TO ENSURE THE SAFETY OF ALL PERSONS AND PROPERTIES AT THE SITE DURING CONSTRUCTION. ALL EXCAVATIONS SHALL CONFORM TO CURRENT OSHA STANDARDS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE HIS WORK WITH THE APPROPRIATE HIGHWAY & UTILITY DEPARTMENTS. WORK WITHIN THE HIGHWAY LAYOUT SHALL CONFORM TO THE CONDITIONS OF THE PERMIT ISSUED BY MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION OR THE LOCAL AUTHORITY.
- ALL SIGN SIZES AND MATERIAL SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC DEVICES" (MUTCD) AND THE OFFICE OF TRAFFIC OPERATIONS, FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION.
- ALL RAMP, CURB CUTS, SIDEWALKS, AND ACCESSIBLE SPACES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT REGULATIONS AND WITH ARCHITECTURAL ACCESS BOARD REGULATIONS (521 CMR 1-47).
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- JOINTS BETWEEN PROPOSED BITUMINOUS CONCRETE PAVEMENT AND EXISTING PAVEMENT TO REMAIN SHALL BE SAWCUT AND SEALED WITH HOT POURED RUBBERIZED ASPHALT SEALER.

PARKING TABULATION:

VETERINARY CLINIC
SPACES PROVIDED = 32

OPEN SPACE / BUILDING COVERAGE SUMMARY

LOT AREA = 152,417± S.F.
 OPEN SPACE REQUIRED = 30% (45,725 S.F.)
 OPEN SPACE PROPOSED = 75% (114,012 S.F.)
 MAXIMUM ALLOWED BUILDING COVERAGE = 60%
 PROPOSED BUILDING COVERAGE = 8.8%
 EXISTING IMPERVIOUS AREA = 27,560 S.F.
 PROPOSED IMPERVIOUS AREA = 38,405 S.F.

DRAINAGE TABULATION

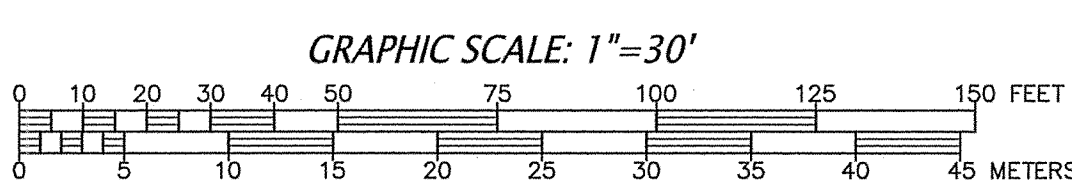
TRENCH DRAIN
 LENGTH=30'
 RIM=142.65 TO 141.75
 6" OUT=140.3±

STO-1
 STORMCEPTOR MODEL 450I
 RIM=141.0
 6" IN=136.50
 12" OUT=136.25

DRAIN DRYWELL
 30" CULTEC 330XLHD CHAMBERS
 W/ 29" Wx49" Lx3.5" T STONE BED
 BOTTOM STONE=134.0
 BOTTOM CHAMBERS=134.5
 12" IN=136.0
 6" OUT=136.50 (END CAP)
 4" OUT=134.60 (SIDE OUTLET)

PRE-CONSTRUCTION NOTE:

PERFORM CONFIRMATORY TEST PIT AT FRONT DRYWELL PRIOR TO THE START OF CONSTRUCTION. TESTING SHALL BE WITNESSED BY THE DESIGN ENGINEER AND TOWN OF SUDBURY STAFF.



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- LEGAL STATUS OF EASEMENTS AND WAYS, NOT DETERMINED BY THIS SURVEY.
- WETLANDS SHOWN HEREON WERE FLAGGED BY GODDARD CONSULTING INC. AND LOCATED ON-THE-GROUND BY SULLIVAN CONNORS AND ASSOCIATES.



ZONING

ZONED: INDUSTRIAL
 AREA = N/A sf
 FRONTAGE = 50 feet
 SETBACKS: FRONT = 20 feet
 = 50 feet Boston Post Rd.
 ROAD C = 50 feet
 SIDE = 30 feet
 REAR = 30 feet

APPROVED BY:
SUDBURY PLANNING BOARD

DATE: _____

PREPARED FOR:
 THE BUDDY DOG HUMANE SOCIETY INC.
 151 BOSTON POST ROAD
 SUDBURY, MA 01776

SULLIVAN, CONNORS AND ASSOCIATES
 LAND SURVEYING AND CIVIL ENGINEERING
 121 BOSTON POST ROAD
 SUDBURY, MASSACHUSETTS 01776
 PHONE: 978-443-9566 FAX: 978-443-8915

PROJECT:
PROPOSED SITE PLAN
 OF
183 BOSTON POST ROAD
 IN
SUDBURY, MASS.

REVISED: _____ DESCRIPTION: _____
 DRAWN BY: REM CHECK BY: VC
 DATE: JUNE 12, 2019

PROPOSED SITE PLAN
 SCALE: 1"=30' SHEET 2 OF 5.

UTILIZE EXISTING DRIVEWAY AND GRAVEL PARKING AREA AS CONSTRUCTION STAGING AND ENTRANCE. PRESERVE AS LONG AS PRACTICAL IN THE CONSTRUCTION SCHEDULE. ONCE REMOVAL IS NECESSARY PROVIDE STONE CONSTRUCTION ENTRANCE.

TEMPORARY PLUG OUTLET IN STORMCEPTOR TO DRYWELL. NO RUNOFF SHALL ENTER THE DRYWELL EXCEPT ROOF RUNOFF UNTIL THE ENTIRE SITE IS STABILIZED. ONCE STABILIZED REMOVE PLUG AND PLACE SYSTEM ON-LINE.

UTILITY CROSSING
VERIFY LOCATION AND DEPTH OF UNDERGROUND ELECTRIC/UTILITY PIPES PRIOR TO CONSTRUCTION

PROPOSED WATER SERVICE PER UTILITY CO. REQUIREMENTS. CONNECT TO EXISTING SERVICE IF ADEQUATE SIZE AND CONDITION.

ACCESS, EGRESS, AND UTILITY EASEMENT "C"

DO NOT ENTER SIGN

ENTRANCE SIGN

CB Fnd. BROKEN

DH Fnd. 6.12' BACK

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

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PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

PROPOSED EROSION BARRIER

GOODMAN'S HILL ROAD

BOSTON POST ROAD (1901 STATE LAYOUT)

SILT SACK & HAYBALE RING AT ALL CATCH BASINS

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

CROSS SECTION

PLAN VIEW

EROSION BARRIER

NOT TO SCALE

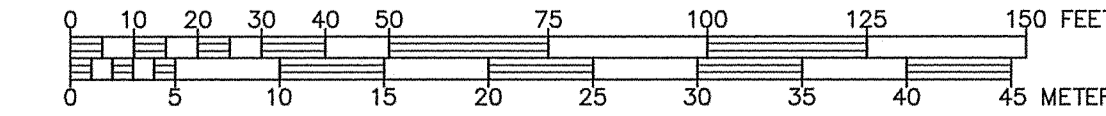
PLAN VIEW

SECTION A-A

NOTES:
1. SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. PLACE BALES WITH ENDS TIGHTLY ABUTTING. STONE BACKFILL WILL PREVENT EROSION OR FLOW AROUND THE BALES.

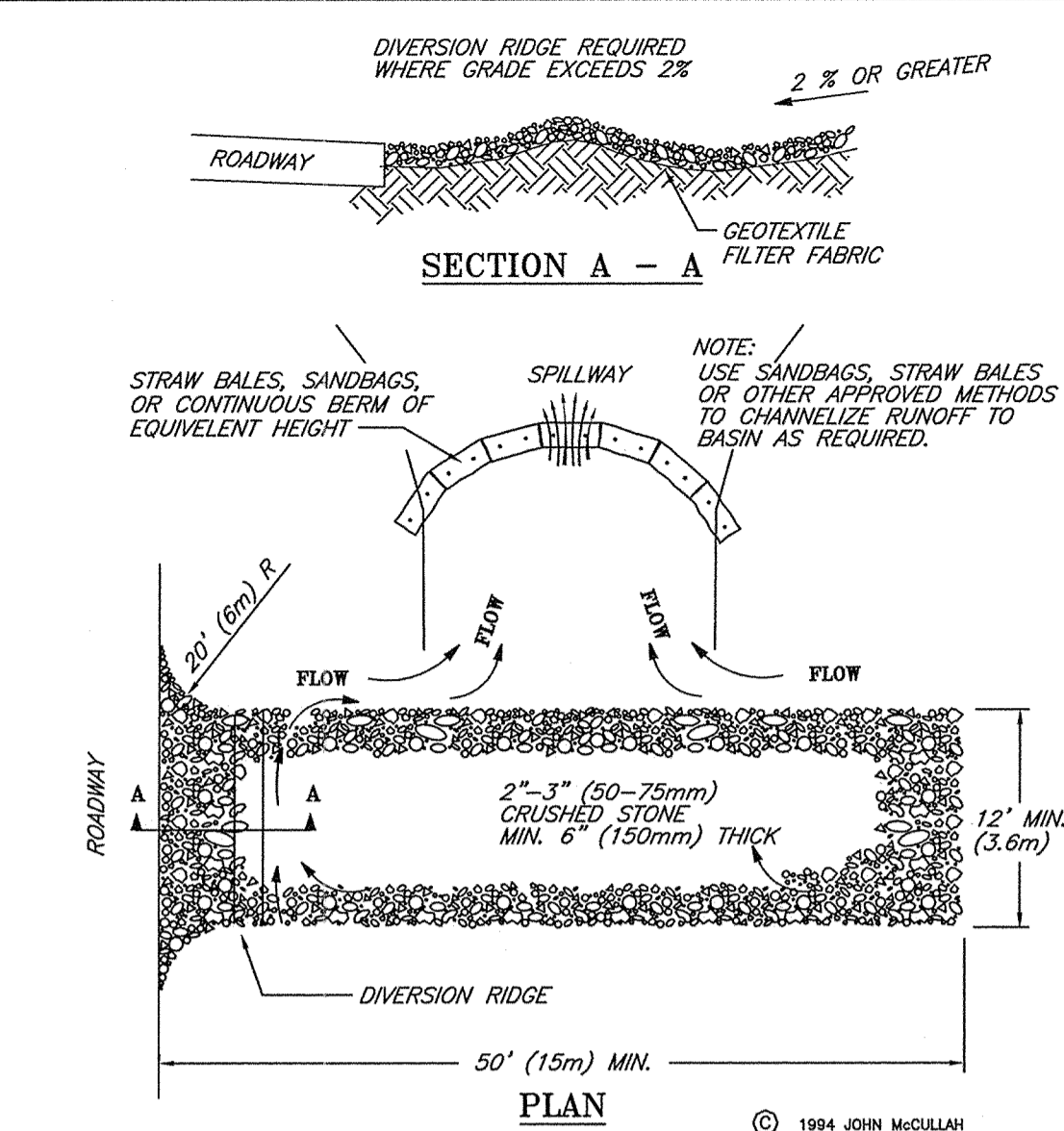
STRAW BALE/GRAVEL SEDIMENT BARRIER AT CATCH BASINS
NOT TO SCALE

GRAPHIC SCALE: 1"=30'

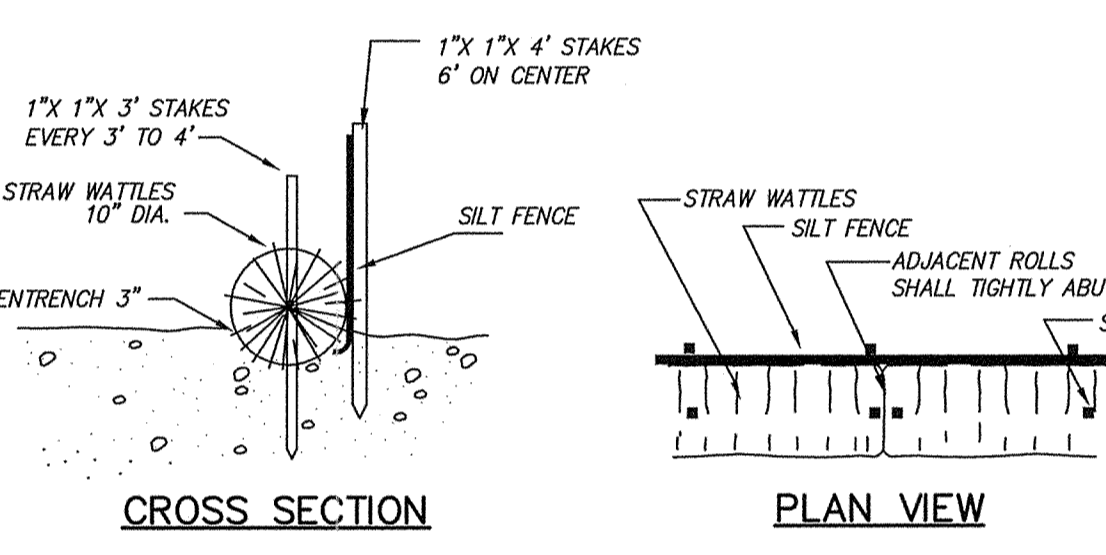


EROSION AND SEDIMENTATION CONTROL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE PLANS AND PERMIT CONDITIONS.
2. PRIOR TO INITIATING CONSTRUCTION, ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND DETAIL DRAWINGS.
3. THIS PLAN DEPICTS THE MINIMUM REQUIRED SEDIMENTATION AND EROSION CONTROLS. THE CONTRACTOR SHALL EMPLOY ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS NECESSITATED BY SITE CONDITIONS, OR AS DIRECTED BY THE OWNER, THE OWNER'S REPRESENTATIVE, OR THE CONSERVATION COMMISSION TO ENSURE PROTECTION OF ALL WETLAND RESOURCES AND CONTROL SEDIMENT TRANSPORT. IF SEDIMENTATION PLUMES OCCUR, THE CONTRACTOR SHALL STOP WORK AND INSTALL ADDITIONAL SEDIMENTATION CONTROL DEVICES IMMEDIATELY TO PREVENT FURTHER SEDIMENTATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY AND PERMANENT SEDIMENTATION AND EROSION CONTROLS UNTIL WORK IS COMPLETE AND ALL AREAS HAVE BEEN PERMANENTLY STABILIZED. AT SUCH TIME THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SEDIMENTATION AND EROSION CONTROL MEASURES.
5. THE CONTRACTOR SHALL INSPECT SEDIMENTATION AND EROSION CONTROLS ON A DAILY BASIS AND IMMEDIATELY AFTER EACH RAINFALL; REPAIRS SHALL BE MADE BY THE END OF THE WORKING DAY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR WHEN THE VOLUME REACHES 1/4 TO 1/2 THE HEIGHT OF SILT FENCE OR SEDIMENT TRAP, OR AS DIRECTED BY THE LOCAL AUTHORITY.
6. SOIL STOCKPILES SHALL BE STABILIZED TO PREVENT EROSION, AND A PERIMETER SEDIMENT CONTROL SYSTEM SHALL BE INSTALLED. NO MATERIALS SUBJECT TO EROSION SHALL BE STOCKPILED OVERNIGHT WITHIN 100 FEET OF A WETLAND UNLESS COVERED.
7. DISTURBED AREAS SHALL BE STABILIZED BY LOAMING AND SEEDING, OR BY ANOTHER APPROVED METHOD, AS SOON AS POSSIBLE AFTER THE FINISHED GRADE HAS BEEN MET. DISTURBED AREAS WITH SLOPES 3:1 (H:V) OR GREATER SHALL BE COVERED WITH LOAM AND STABILIZED WITH HYDROSEED AND SOIL TACKIFIER. IF FINAL GRADING DOES NOT OCCUR DURING THE GROWING SEASON, THESE AREAS SHALL BE MULCHED WITH HAY SECURED.
8. DEWATERING OPERATIONS, IF REQUIRED, SHALL DISCHARGE ONTO STABILIZED AREAS, AND ALL DISCHARGE WATER IS TO PASS THROUGH SEDIMENTATION CONTROL DEVICES TO PREVENT IMPACTS UPON WATER BODIES, BORDERING VEGETATED WETLANDS, DRAINAGE SYSTEMS AND ADJUTING PROPERTIES. AT A MINIMUM ALL DISCHARGES SHALL BE INTERCEPTED BY HAYBALE CORRAL AND HAYBALE CHECK DAMS SPACED 10' APART.
9. STAKED WATLES AND SILT FENCE SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT OR AS INDICATED ON THE PLANS. ADDITIONAL WATLES AND SILT FENCE SHALL BE LOCATED AS CONDITIONS WARRANT, AND IN SOME AREAS STRUCTURES MAY HAVE TO BE DUPLICATED AT REGULAR INTERVALS.
10. STREET SWEEPING IN THE VICINITY OF THE PROJECT AREA SHALL BE PERFORMED AS NEEDED UNTIL THE PROJECT LIMITS HAVE BEEN STABILIZED. ALL SEDIMENT TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE SWEEP AT THE END OF EACH WORKING DAY.
11. ALL EXISTING AND PROPOSED DRAINAGE SYSTEM INLETS, WHICH MAY RECEIVE STORMWATER FLOW FROM DISTURBED AREAS, SHALL BE PROVIDED WITH SILT SACKS. THE CONTRACTOR SHALL MAINTAIN THESE STOPS PER THE MANUFACTURERS RECOMMENDATIONS UNTIL ALL WORK IS COMPLETED AND ALL AREAS HAVE BEEN ADEQUATELY STABILIZED.
12. DUST CONTROL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED PROPERLY THROUGHOUT DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. METHODS FOR DUST CONTROL SHALL INCLUDE WATER SPRINKLING AND/OR OTHER METHODS APPROVED BY THE ENGINEER.
13. ALL VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF CRUSHED STONE TO A DEPTH OF 6" FOR THE FIRST 50 FEET FROM EXISTING PAVED STREETS. IF THE SITE CONDITIONS ARE SUCH THAT THE GRAVEL PAD DOES NOT REMOVE THE MAJORITY OF THE MUD AND DEBRIS, THEN THE TIRES SHALL BE WASHED BEFORE ANY VEHICLES ENTER ADJACENT ROADWAYS. ALL WATER USED FOR THE WASHING SHALL BE COLLECTED AND TREATED PRIOR TO ENTERING THE DRAINAGE SYSTEM. THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION ENTRANCE DAILY AND AFTER HEAVY USE.



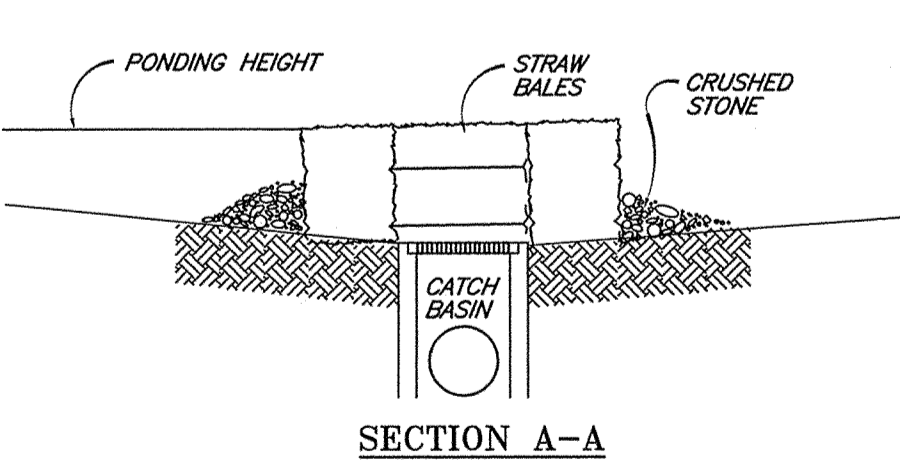
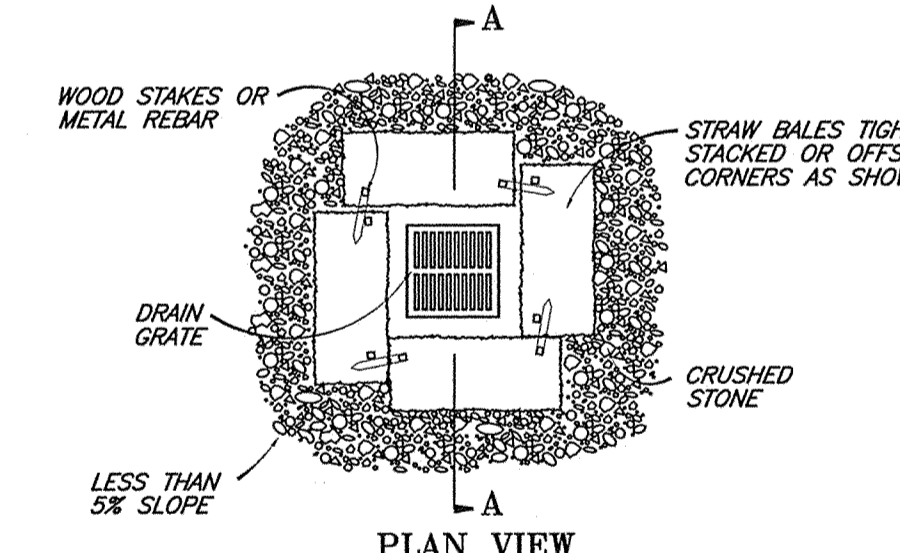
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. STONE APRON SHALL BE REPLACED AS DEPOSITED SOILS BUILD UP.



NOTES:
1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" DEEP. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.

EROSION BARRIER

NOT TO SCALE

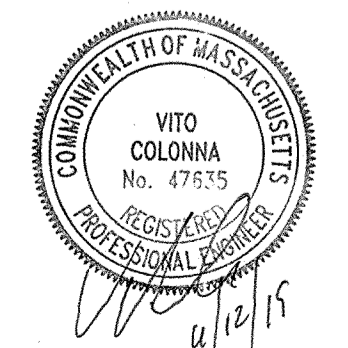


NOTES:
1. SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. PLACE BALES WITH ENDS TIGHTLY ABUTTING. STONE BACKFILL WILL PREVENT EROSION OR FLOW AROUND THE BALES.

STRAW BALE/GRAVEL SEDIMENT BARRIER AT CATCH BASINS
NOT TO SCALE

APPROVED BY:
SUDBURY PLANNING BOARD

DATE: _____



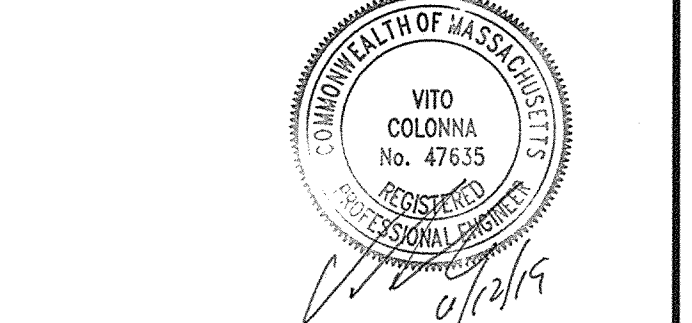
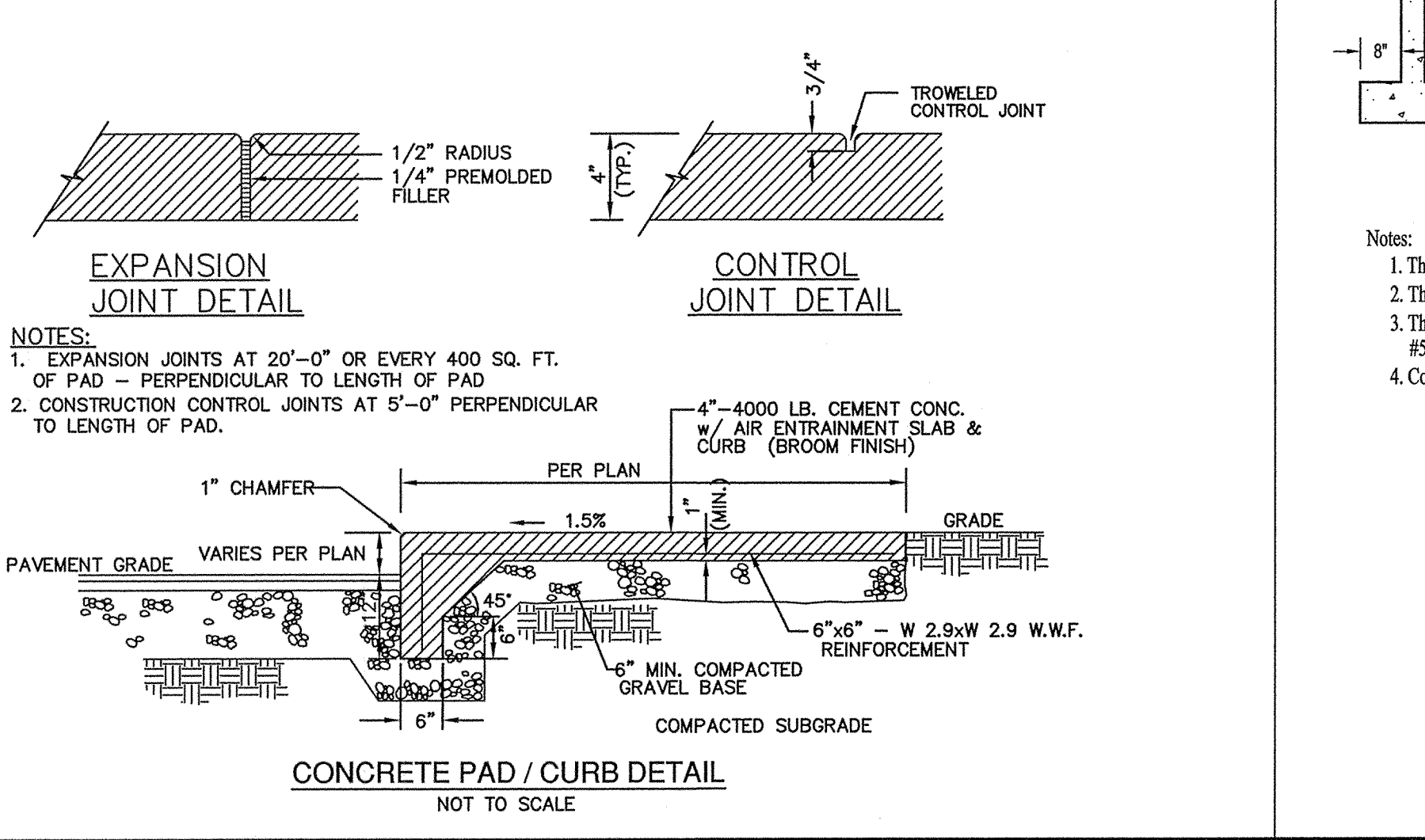
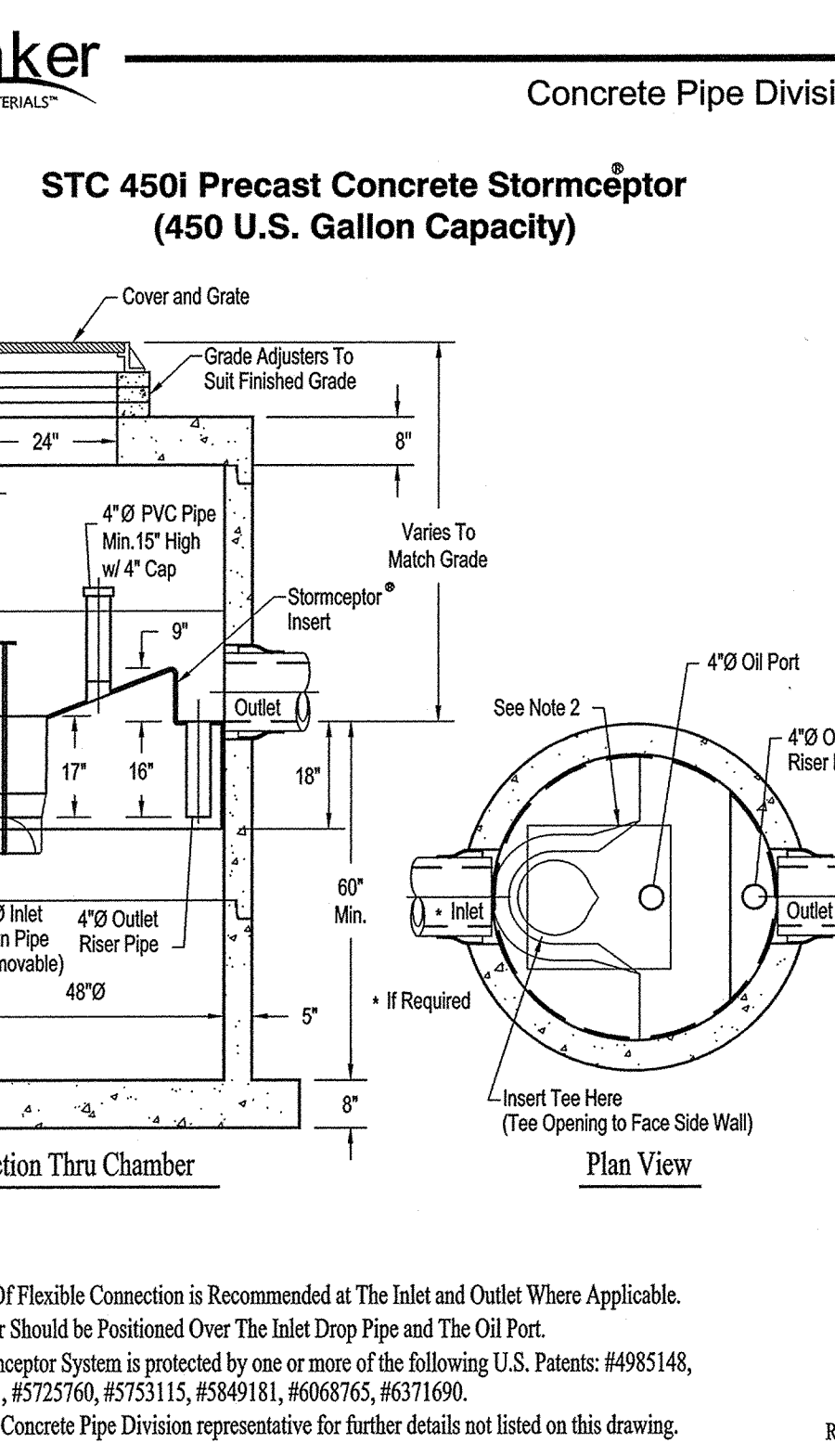
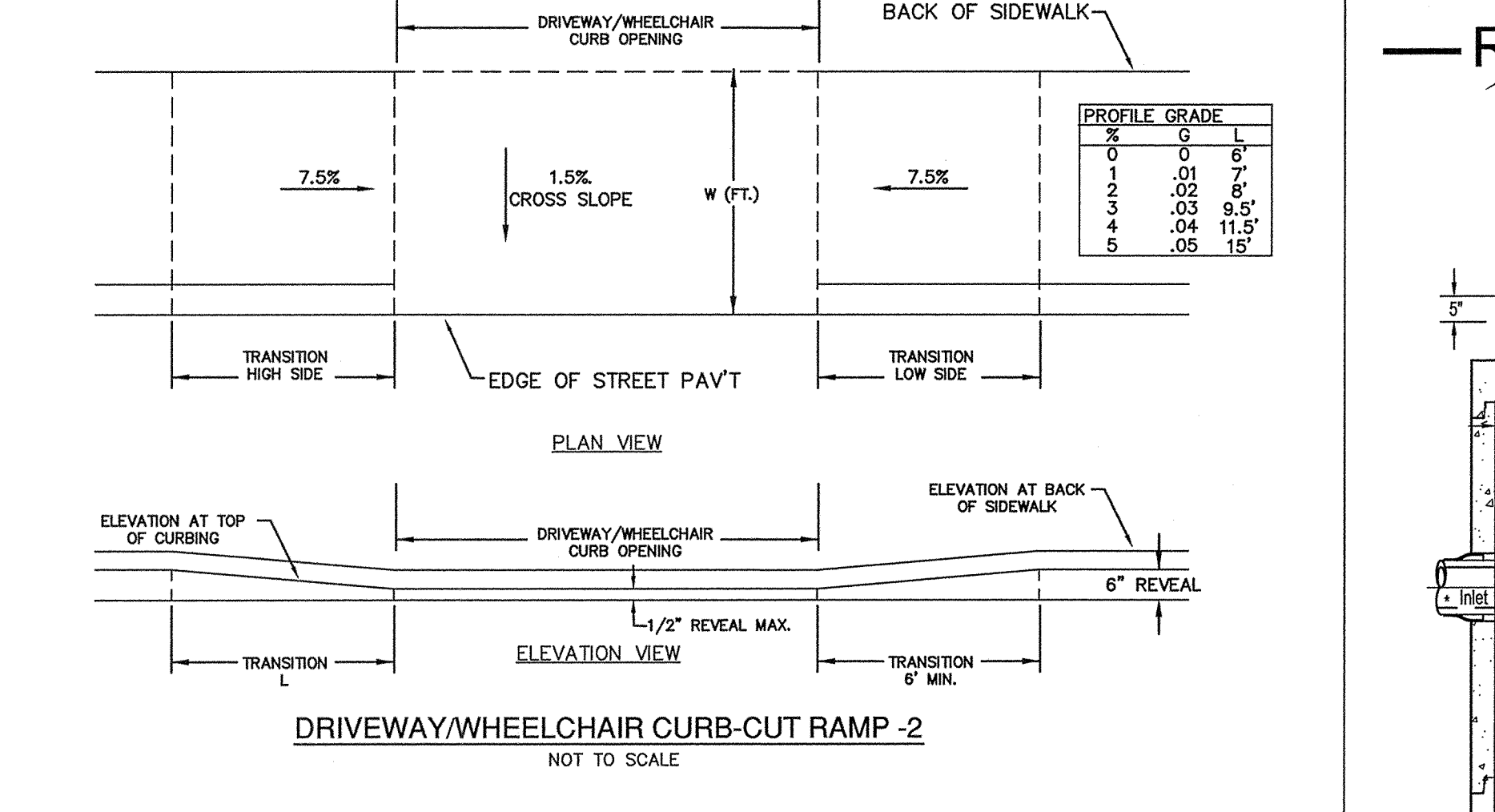
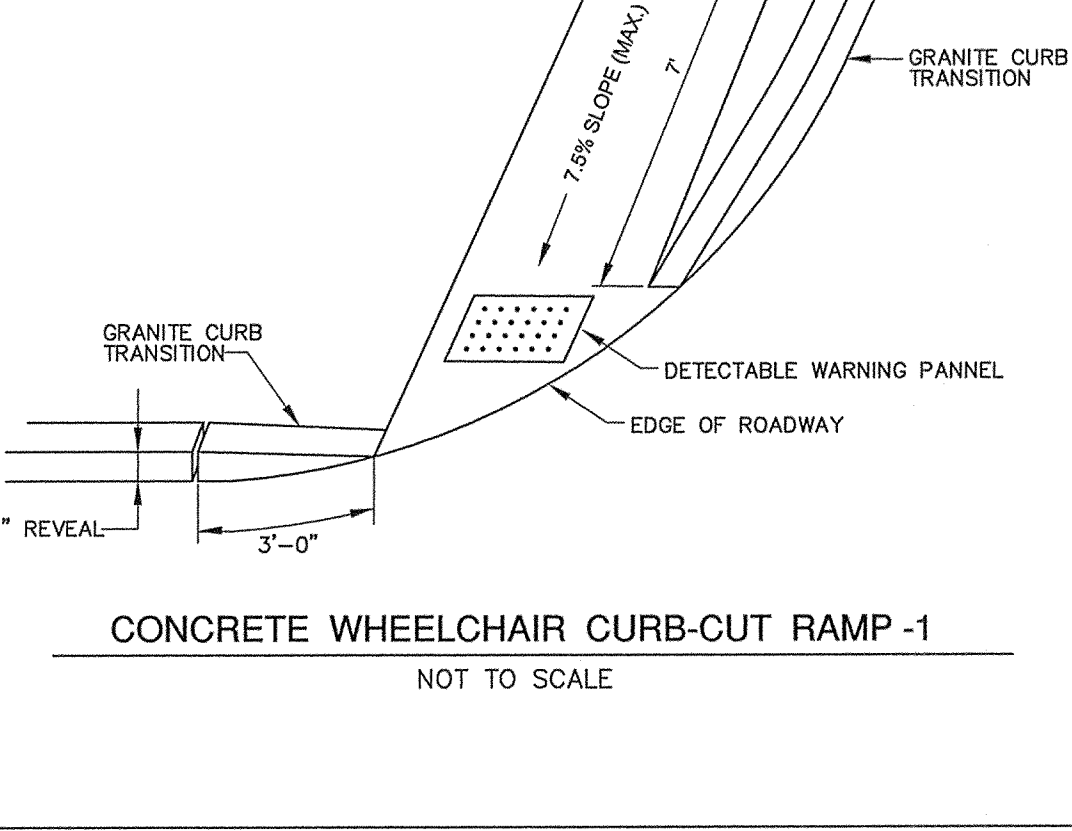
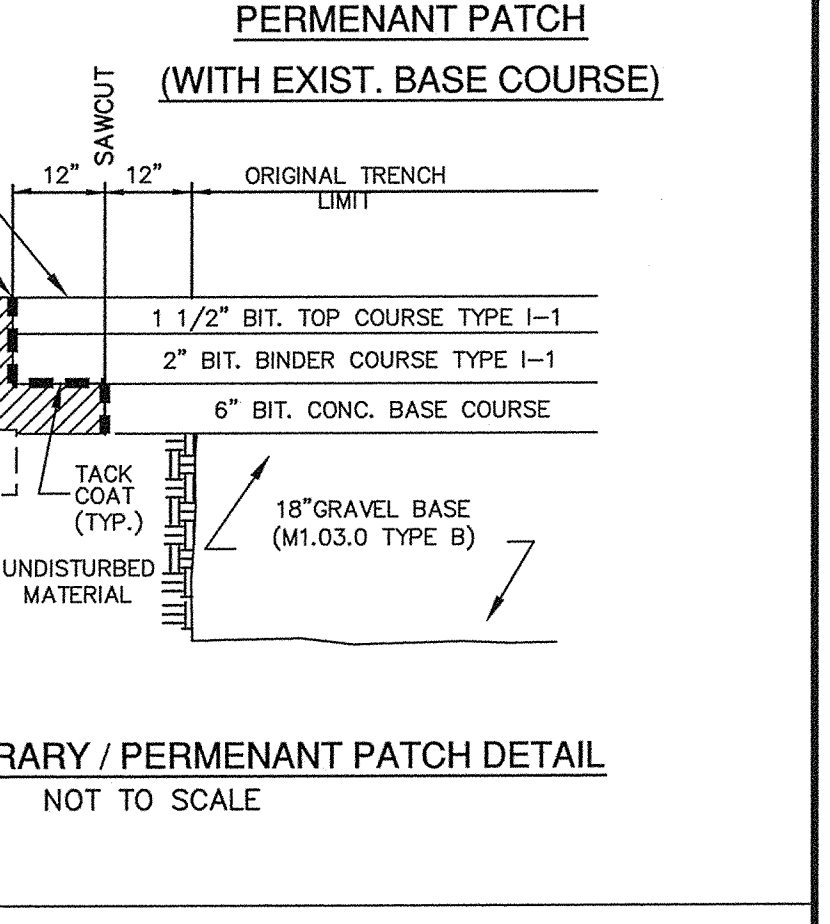
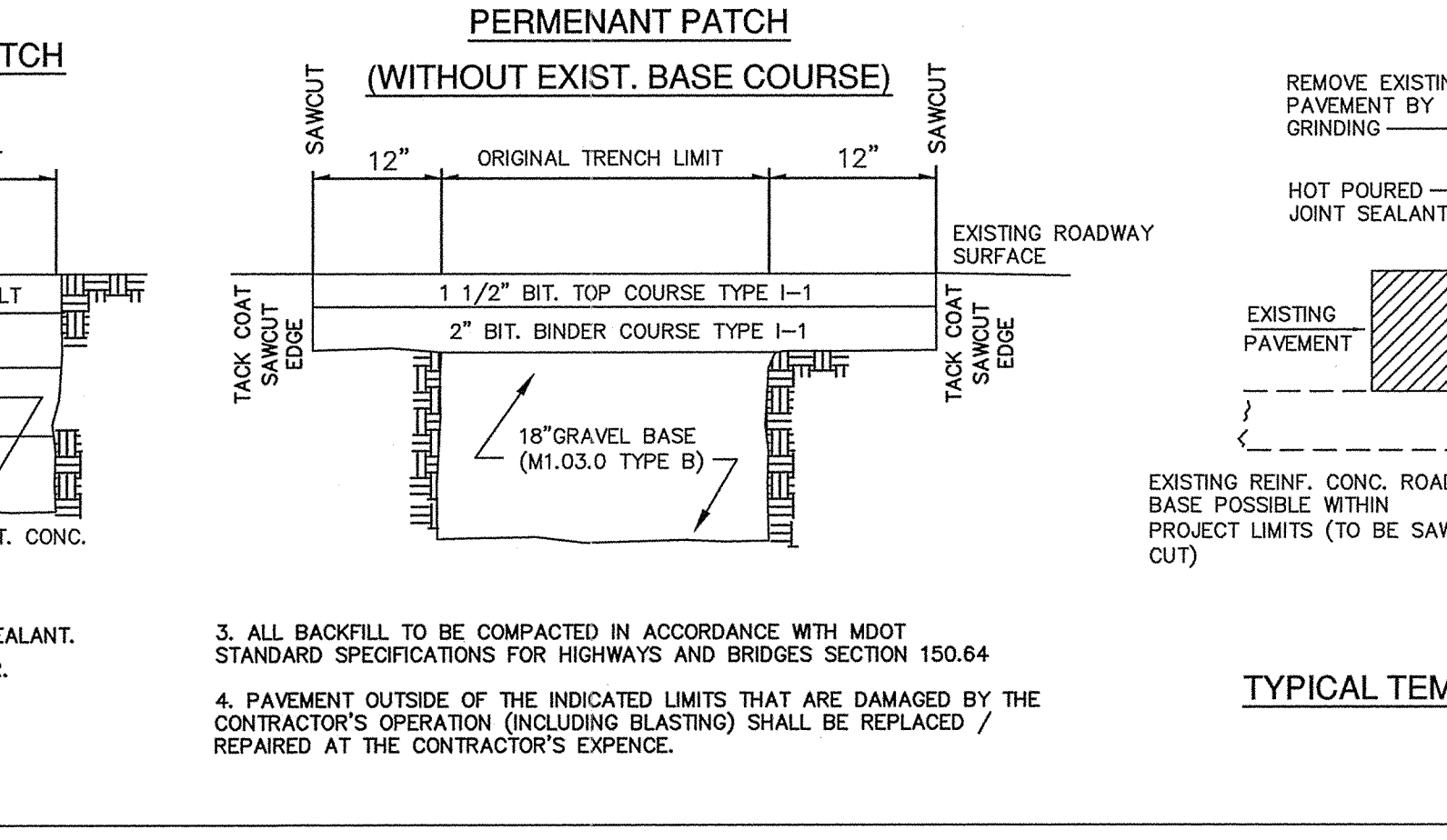
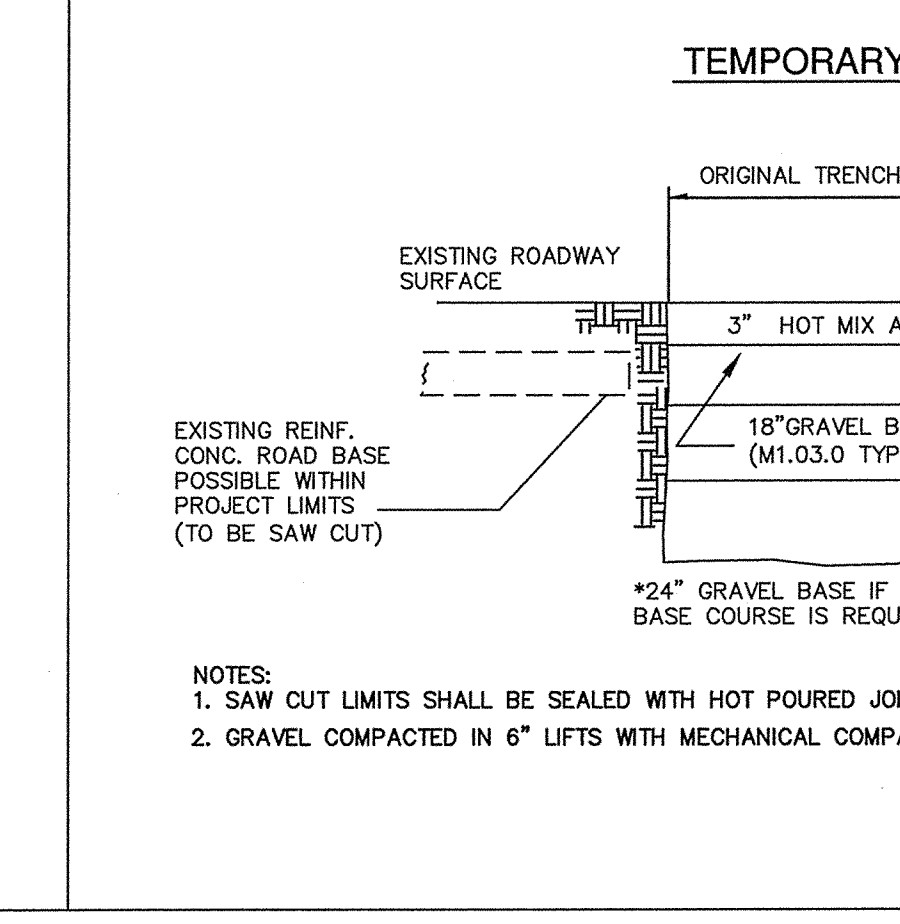
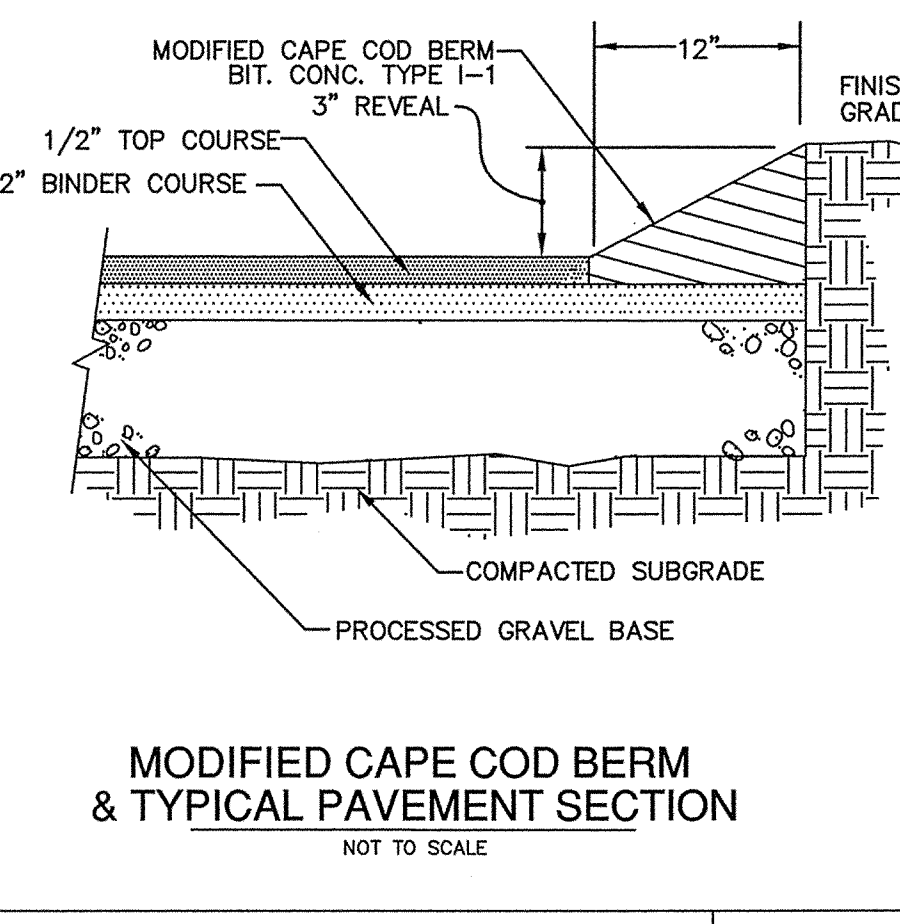
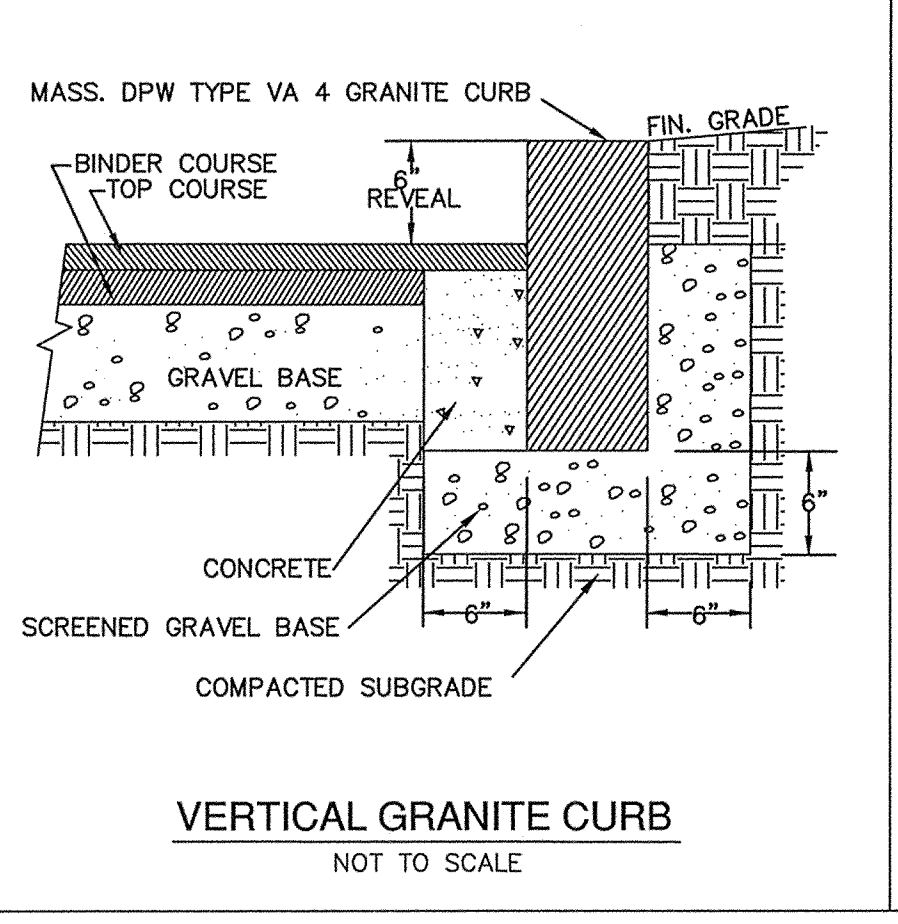
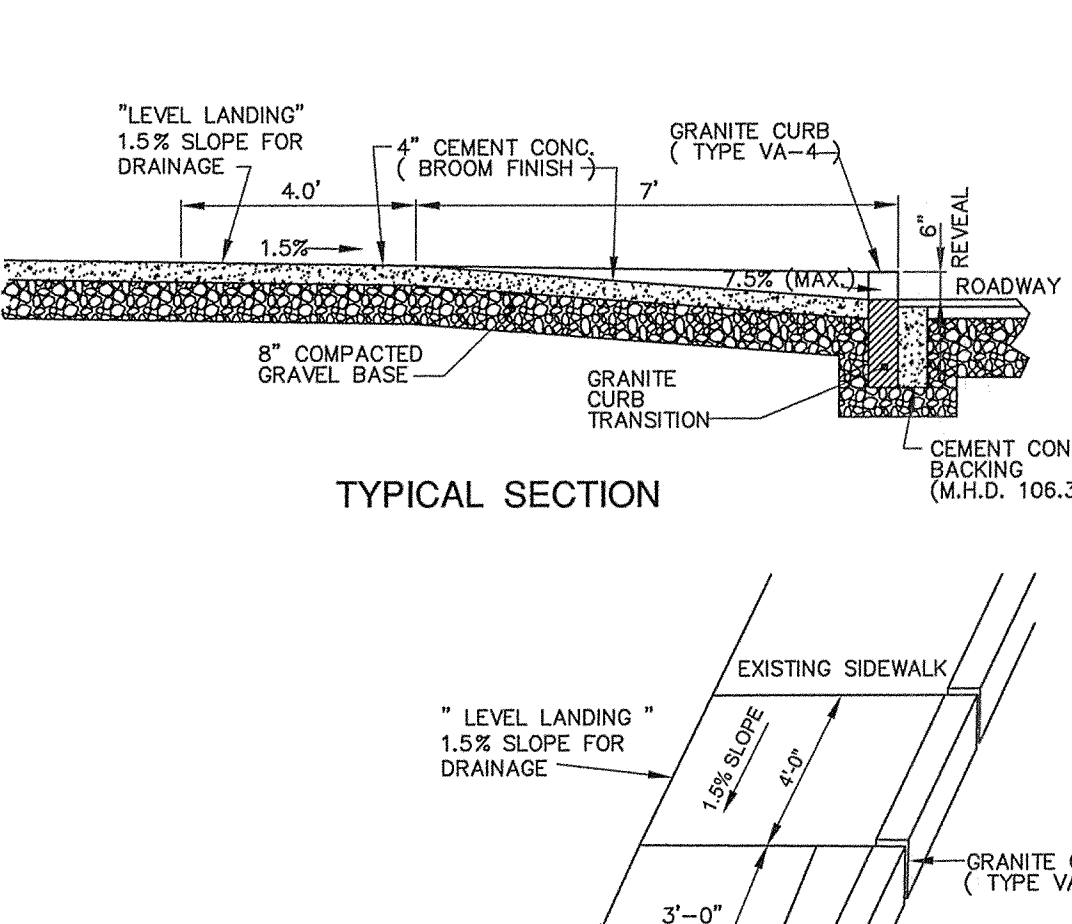
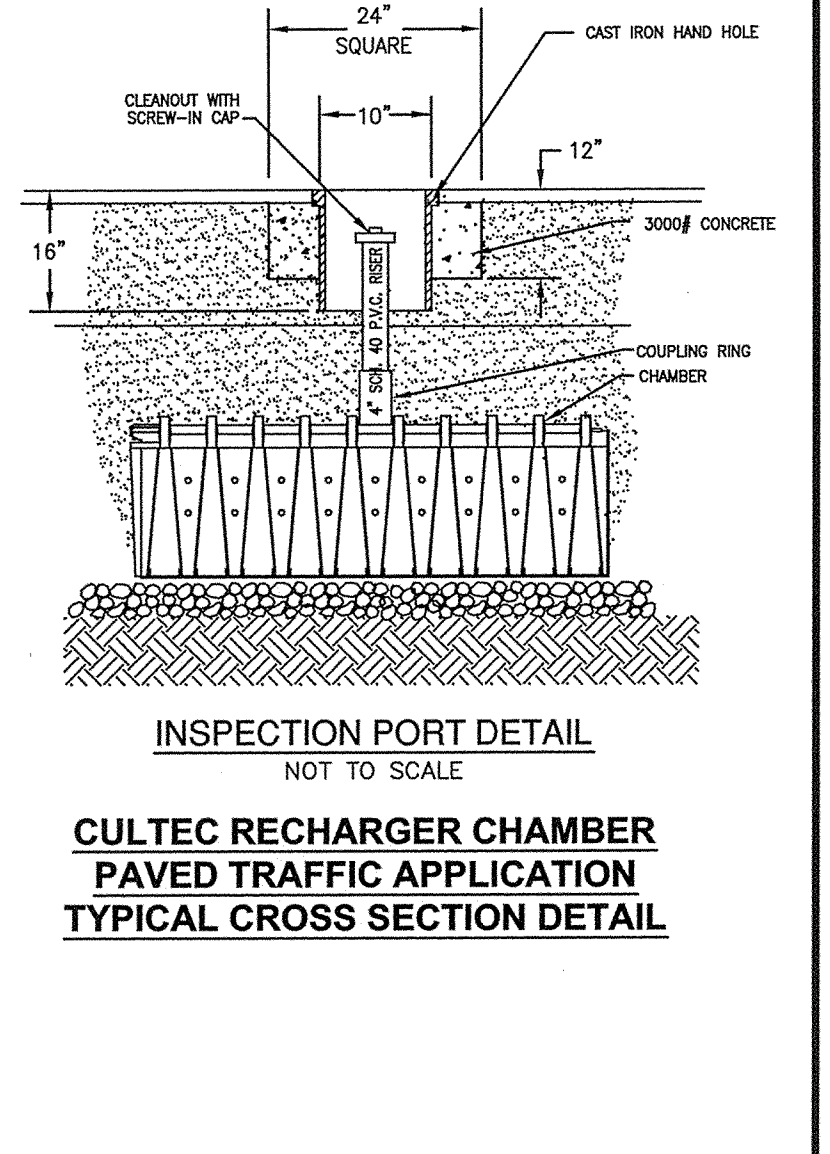
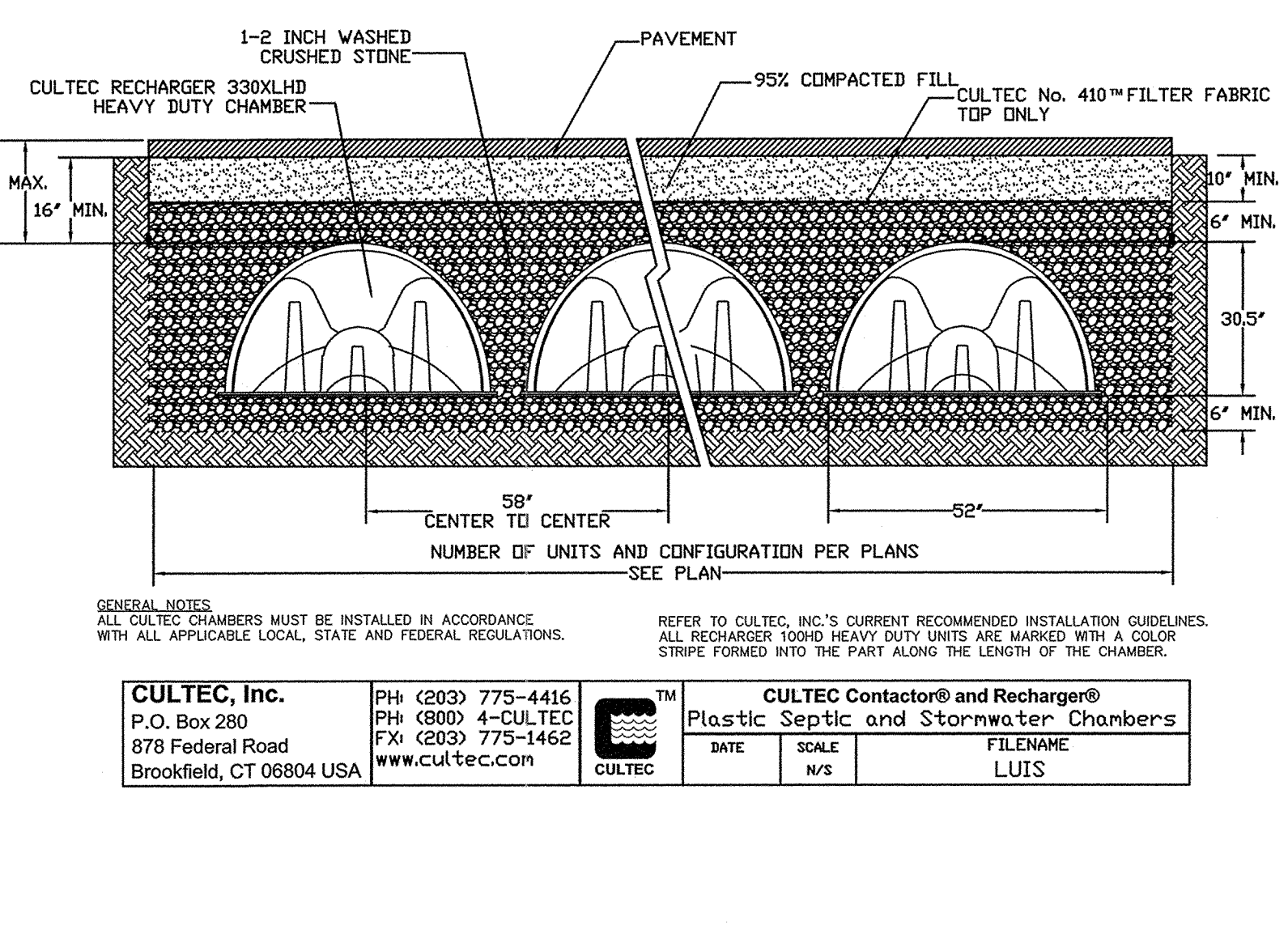
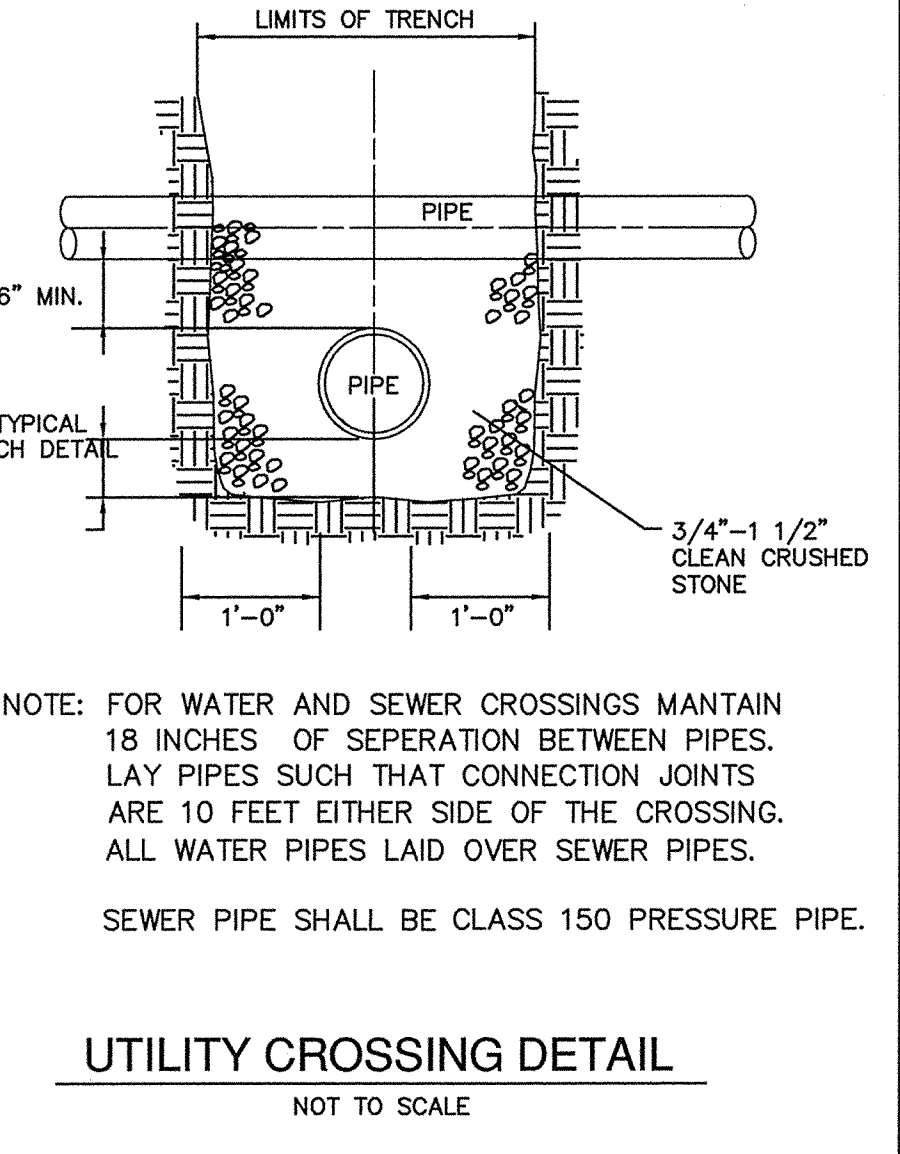
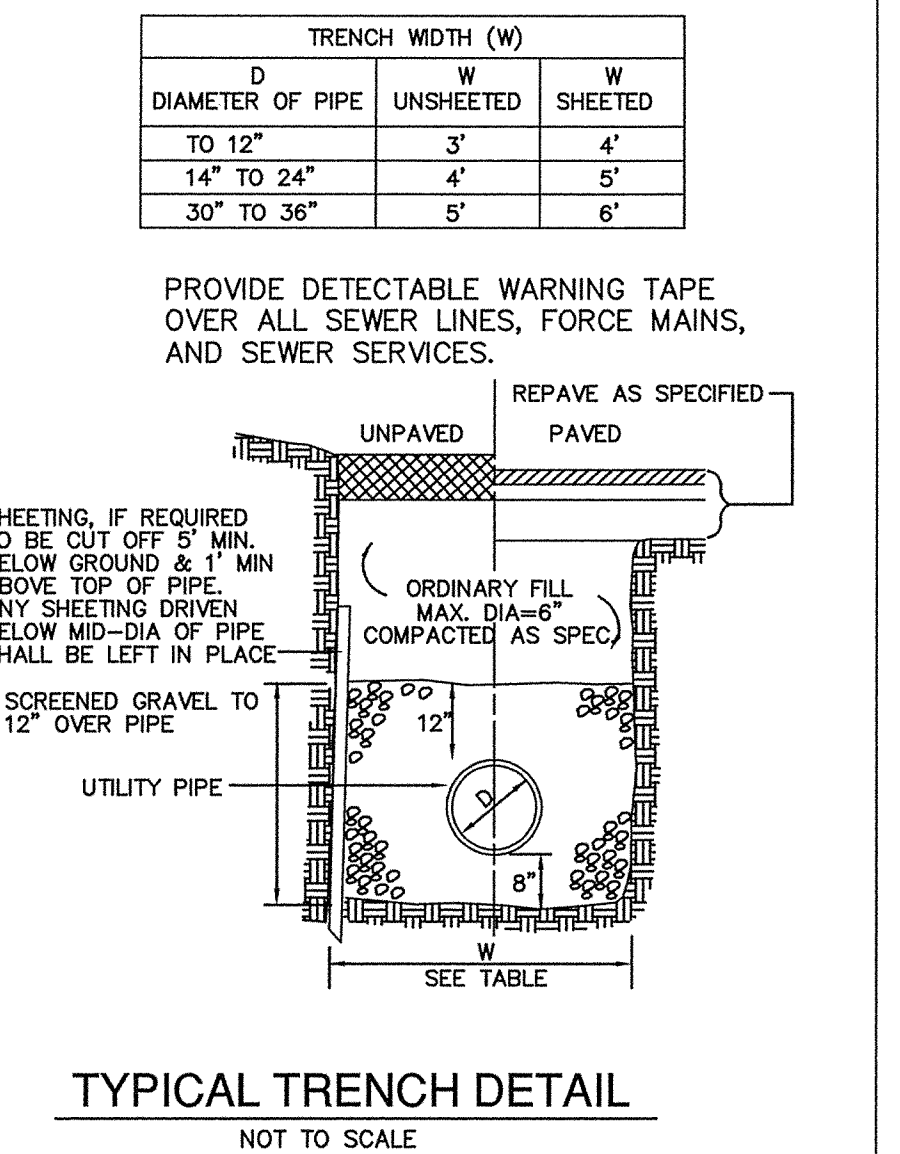
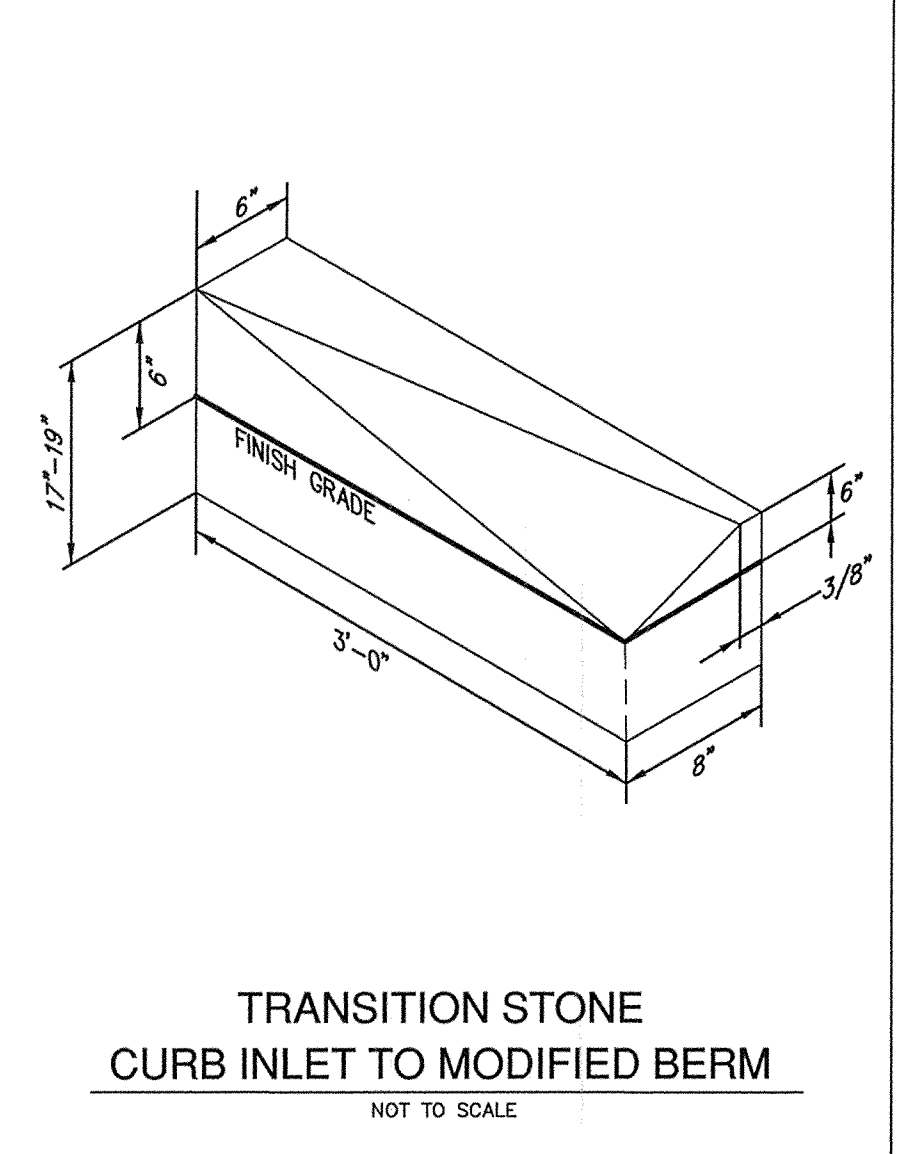
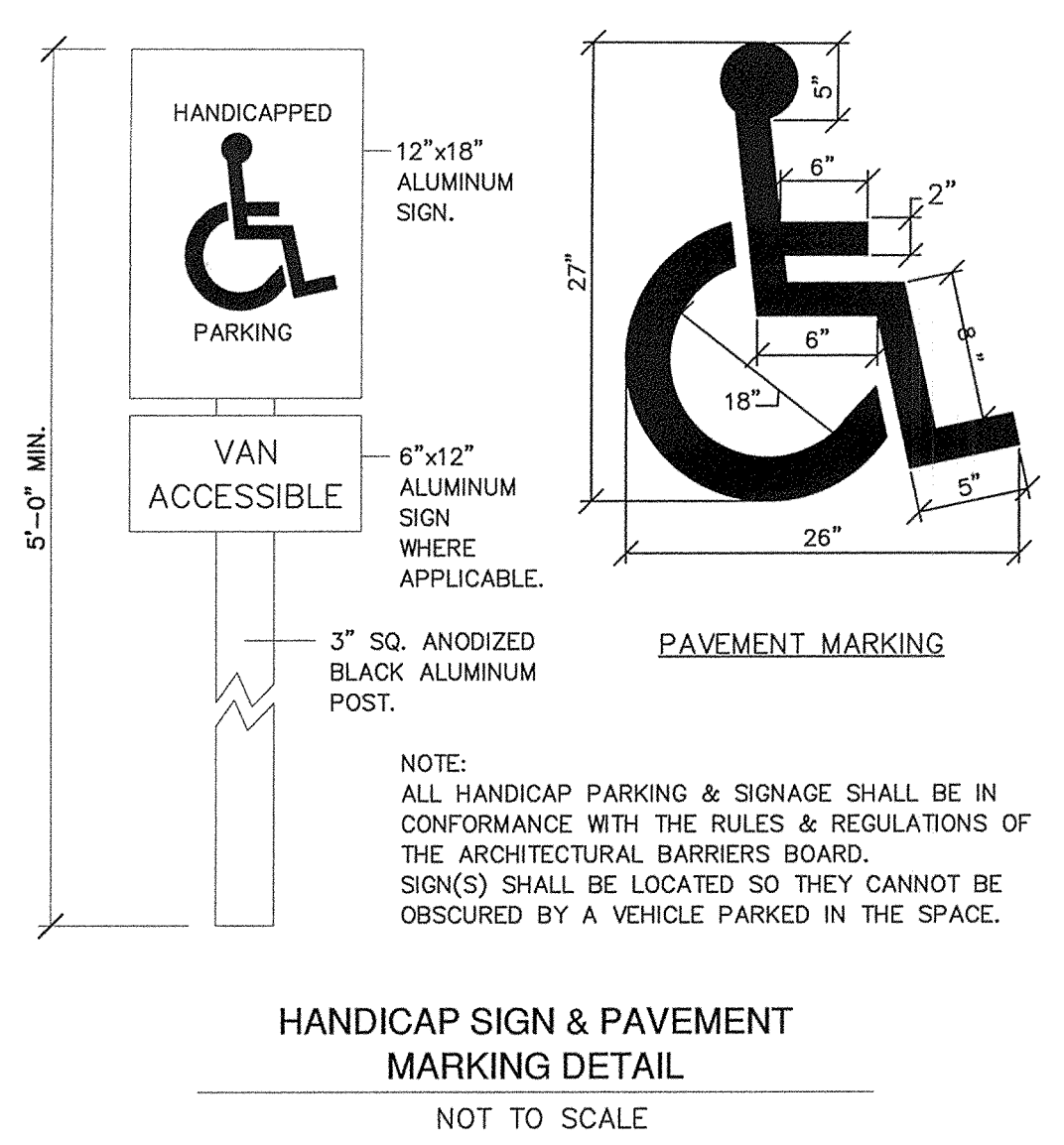
PREPARED FOR:
THE BUDDY DOG HUMANE SOCIETY INC.
151 BOSTON POST ROAD
SUDBURY, MA 01776

SULLIVAN, CONNORS AND ASSOCIATES
LAND SURVEYING AND CIVIL ENGINEERING
121 BOSTON POST ROAD
SUDBURY, MASSACHUSETTS 01776
PHONE: 978-443-9566 FAX: 978-443-8915

PROJECT:
PROPOSED SITE PLAN
OF
183 BOSTON POST ROAD
IN
SUDBURY, MASS.

REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2019	

EROSION CONTROL PLAN
SCALE: 1"=30' SHEET 3 OF 5.



PREPARED FOR:
THE BUDDY DOG HUMANE SOCIETY INC.
151 BOSTON POST ROAD
SUDBURY, MA 01776

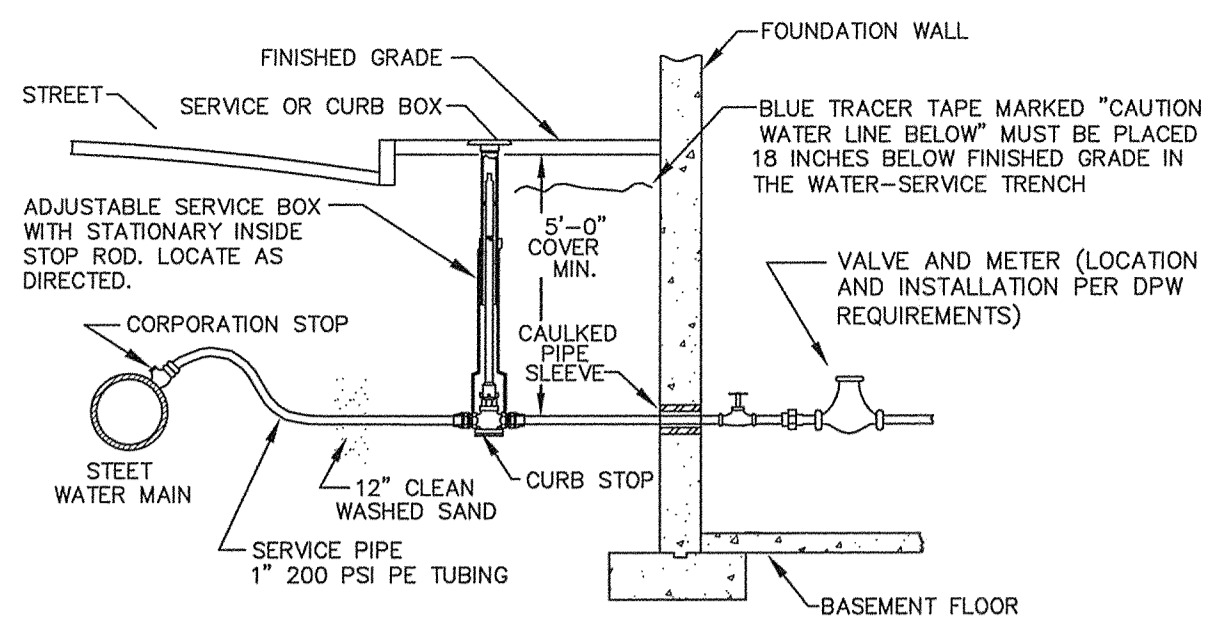
SULLIVAN, CONNORS AND ASSOCIATES
LAND SURVEYING AND CIVIL ENGINEERING
121 BOSTON POST ROAD
SUDBURY, MASSACHUSETTS 01776
PHONE: 978-443-9566 FAX: 978-443-8915

CONSTRUCTION DETAILS OF
183 BOSTON POST ROAD
IN
SUDBURY, MA

APPROVED BY:
SUDBURY PLANNING BOARD

DATE: _____

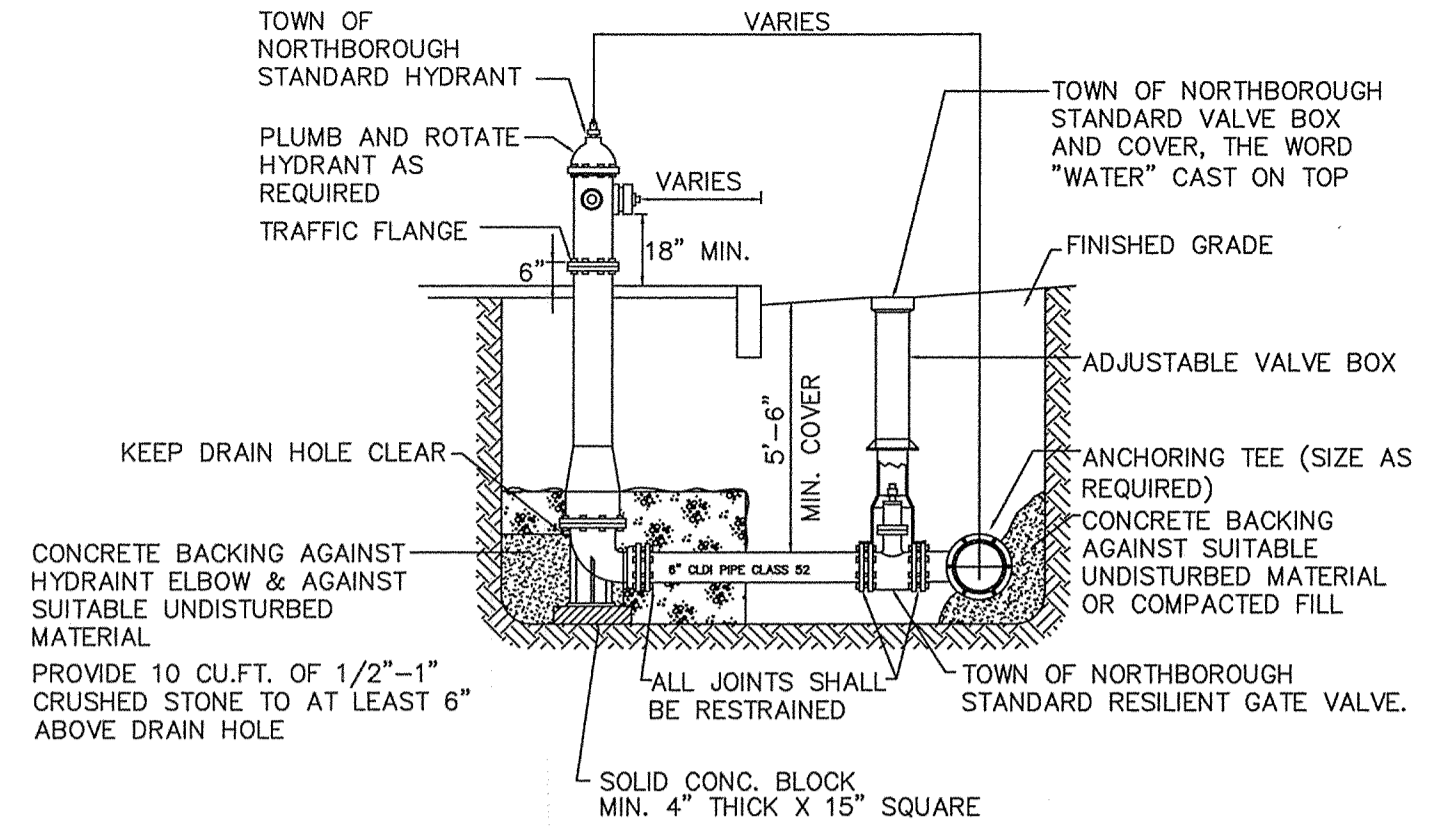
REVISIONS:
DRAWN BY: REM CHECK BY: VC
DATE: JUNE 12, 2019
SCALE: NONE SHEET 4 OF 5.



NOTES:
 PLASTIC 200 PSI TUBING SHALL MEET AWWA SPEC. AND BE 200 PSI (MIN.)
 ALL CONSTRUCTION METHODS AND MATERIALS INCLUDING CURB STOP, CORPORATION STOP, SERVICE PIPE, SERVICE BOX, VALVES, AND METER SHALL BE IN ACCORDANCE WITH THE TOWN OF NORTHBOROUGH DPW STANDARDS AND SPECIFICATIONS.

TYPICAL WATER SERVICE CONNECTION

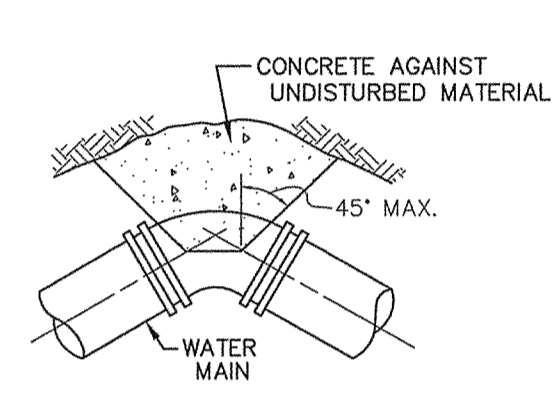
NOT TO SCALE



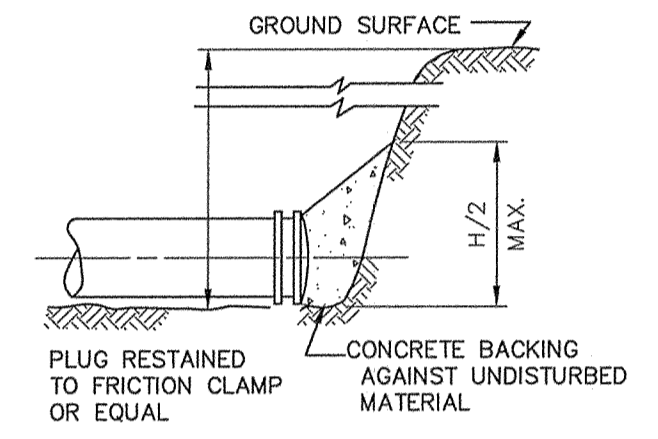
CONCRETE BACKING AGAINST HYDRANT ELBOW & AGAINST SUITABLE UNDISTURBED MATERIAL
 PROVIDE 10 CU.FT. OF 1/2"-1" CRUSHED STONE TO AT LEAST 6" ABOVE DRAIN HOLE
 ALL JOINTS SHALL BE RESTRAINED
 TOWN OF NORTHBOROUGH STANDARD VALVE BOX AND COVER, THE WORD "WATER" CAST ON TOP

TYPICAL HYDRANT & VALVE DETAIL

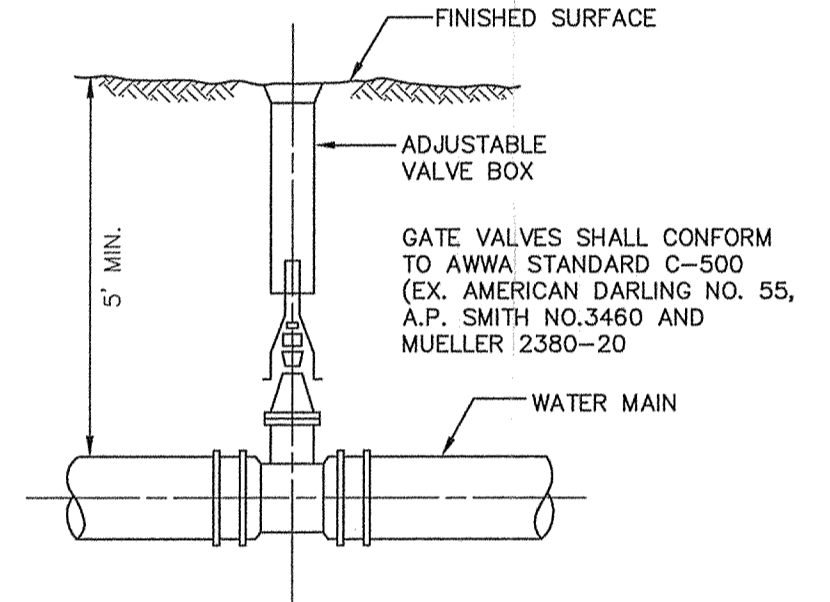
NOT TO SCALE



TYPICAL BEND

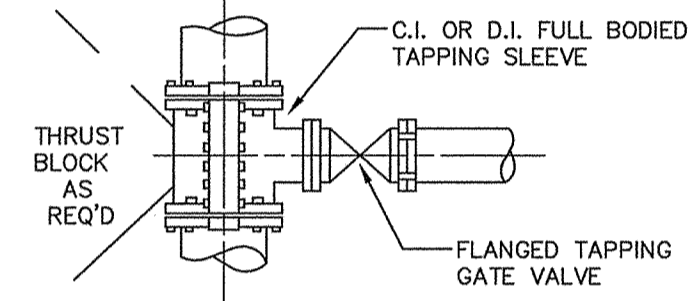


TYPICAL PLUG



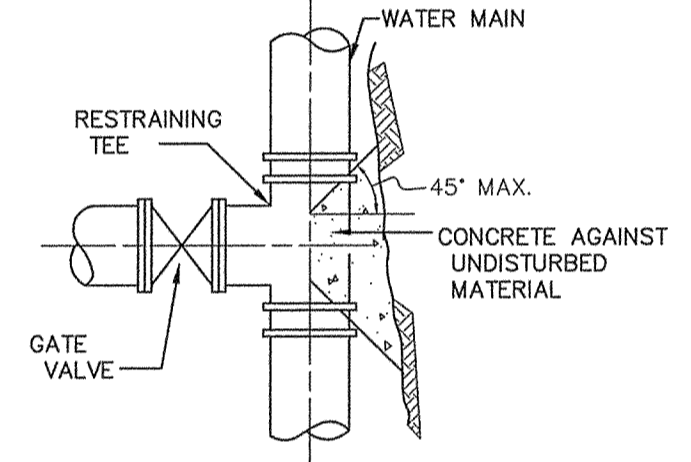
TYPICAL GATE VALVE

NOT TO SCALE

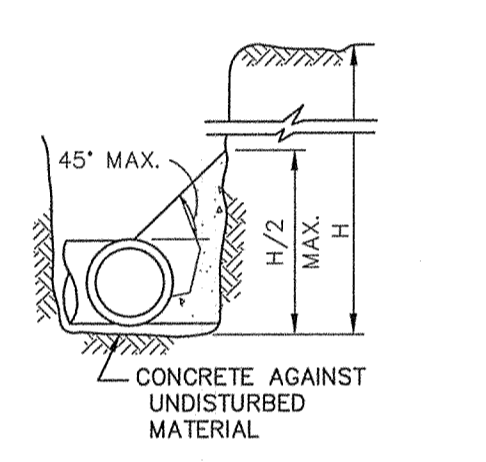


TAPPING SLEEVE AND VALVE DETAILS

NOT TO SCALE



TYPICAL TEE & VALVE



TYPICAL SECTION

NOTE: CONCRETE FOR THRUST BLOCKS SHALL BE NO LONGER THAN THE RATIO OF 2 1/2 : 5 1/2 AND SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2000 PSI (SO THAT FLANGES AND BOLTS ARE ACCESSIBLE.)

PIPE SIZE INCHES	BEARING AREAS OF THRUST BLOCKS (BEARING AREA IN SQUARE FT.)			
	1/4 BEND	1/8 BEND	1/16 BEND OR LESS	PLUG TEES
6 AND 8	8	8		8
10 AND 12	22	13	8	16

TYPICAL THRUST BLOCK DETAIL

NOT TO SCALE



PREPARED FOR:
 THE BUDDY DOG HUMANE SOCIETY INC.
 151 BOSTON POST ROAD
 SUDBURY, MA 01776

SULLIVAN, CONNORS AND ASSOCIATES
 LAND SURVEYING AND CIVIL ENGINEERING
 121 BOSTON POST ROAD
 SUDBURY, MASSACHUSETTS 01776
 PHONE: 978-443-9566 FAX: 978-443-8915

CONSTRUCTION DETAILS OF
 183 BOSTON POST ROAD
 IN
 SUDBURY, MA

APPROVED BY:
 SUDBURY PLANNING BOARD

DATE: _____

REVISED:	DESCRIPTION:
DRAWN BY: REM	CHECK BY: VC
DATE: JUNE 12, 2019	
SCALE: NONE	SHEET 5 OF 5.



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

Amherst Office
15 Research Drive
Amherst, Massachusetts 01002
Tel 413.256.0202 Fax 413.256.1092

June 28, 2019

Lori Capone
Town of Sudbury
Conservation Commission
275 Old Lancaster Road
Sudbury, MA

RE: Davis Farm Conservation Area Meadow Restoration Plan - DRAFT

Dear Ms. Capone:

SWCA Environmental Consultants (SWCA) is pleased to submit a draft meadow restoration plan for the meadow located at the Davis Farm Conservation Area in Sudbury, Massachusetts. The goal of the project is to successfully revert this formally-established meadow back to its intended state. As you are aware, the meadow had become overgrown with woody species (both native and non-native/invasive) and was not functioning as a meadow for pollinator use. This draft document details a proposed meadow restoration plan that SWCA feels will aid in accomplishing the goals of this restoration.

If you have any questions or comments regarding this report or the meadow restoration plan, please do not hesitate to contact me by phone at (413) 658-2056, or via email at sfisher@swca.com. Thank you for considering SWCA for your project needs.

Sincerely,

Scott Fisher
Team Lead – Ecological Restoration

INTRODUCTION

A historic, one-acre meadow located at the Davis Farm Conservation Area in Sudbury, Massachusetts has converted from a meadow habitat to a scrub-shrub wooded habitat. The area was overgrown with non-native invasive plant species, woodland weeds and several opportunistic trees. The Town of Sudbury (the Town) wishes to restore this area back to a meadow, which will support pollinator habitat and require minor operations and maintenance; such as annual or semi-annual mowing to prevent woody species from dominating the meadow area.

EXISTING CONDITIONS

The site is located on a gentle sloping hillside, flanked to the south and north by conservation trails and forested communities to the east and west. Clearing activities (initiated by the Town) were completed in the fall/winter 2018. Clearing activities involved the use of equipment to cut, remove and/or pile all vegetation existing in the area onsite. Grubbing or other earth disturbances were not performed at the site during these clearing activities.

Non-desirable meadow vegetation was observed throughout most of the meadow area during inspections conducted in June of 2019. Non-meadow vegetation observed includes native woody/vine species such as: Cottonwood (*Populus deltoides*), silky dogwood (*Cornus amomum*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), blackberry (*Rubus sp.*), and Grape sp. (*Vitis sp.*). Non-native, invasive or weed species were also observed, including: glossy buckthorn (*Rhamnus frangula*), bush honeysuckle species (*Lonicera sp.*), Oriental bittersweet (*Celastrus orbiculatus*), common mullein (*Verbascum thapsus*), pokeweed (*Phytolacca decandra*), mugwort (*Artemisia vulgari*), and multiflora rose (*Rosa multiflora*).

Several desirable meadow species were observed including a variety of grass and sedge species (*Scirpus sp.* and *Carex sp.*) and, most notably, daisy fleabane (*Erigeron annuus*).

Several brush piles, consisting of trimmings from the clearing operation, are located within the meadow area. These piles provide nesting cover for a variety of animals and insects and add value to the meadow.

To better communicate existing conditions and future management needs, SWCA has identified six meadow management areas, which are defined by the existing conditions and vegetation coverage within each area. A description of the existing conditions found within each area is detailed below and a figure depicting the locations and size of each area is included in this plan (Figure 1).

AREA 1:

Area 1 is the southernmost management area located at the site and is bordered by the wood line to the south and west. Area 1 is located at the top of the hillside associated with the meadow and consists of a mixture of desirable grasses and sedges and several (approximately 5% coverage) re-sprouting glossy buckthorn (*Rhamnus frangula*), as well as a portion of bare ground.

AREA 2:

Area 2 is located north of Area 1 and west of Area 3. Area 2 is bordered by the westernmost hiking trail and is sloped towards the north. Area 2 consists of a mixture of desirable wildflowers, such as daisy fleabane (*Erigeron annuus*), and 5-10% of Area 2 is currently covered with non-desirable species, such as glossy buckthorn (*Rhamnus frangula*), silky dogwood (*Cornus amomum*), Oriental bittersweet (*Celastrus orbiculatus*), cottonwood samplings (*Populus deltoides*), and poison ivy (*Toxicodendron radicans*). There are also sections of bare ground within Area 2.

AREA 3:

Area 3 is located east of Area 2 and south of Area 4. Area 3 is mostly dominated (80%) with desirable wildflowers, such as daisy fleabane (*Erigeron annuus*), and 10-15% of Area 3 is currently covered with non-desirable species, such as blackberry (*Rubus sp.*), glossy buckthorn (*Rhamnus frangula*), bush honeysuckle species (*Lonicera sp.*), Oriental bittersweet (*Celastrus orbiculatus*), common mullein (*Verbascum Thapsus*), pokeweed (*Phytolacca decandra*), cottonwood samplings (*Populus deltoides*), mugwort (*Artemisia vulgaris*), and multiflora rose (*Rosa multiflora*).

AREA 4:

Area 4 is the northernmost area bordered by the western and northern wood line and hiking trails, and by Areas 2 and 3 to the south. Area 4 currently contains 10% bare ground, 25% coverage of cottonwood samplings (*Populus deltoides*), and 10-15% of Area 4 is currently covered with non-desirable species, such as glossy buckthorn (*Rhamnus frangula*), bush honeysuckle species (*Lonicera sp.*), Oriental bittersweet (*Celastrus orbiculatus*), common mullein (*Verbascum Thapsus*), pokeweed (*Phytolacca decandra*), Virginia creeper (*Parthenocissus quinquefolia*), blackberry (*Rubus sp.*), Grape sp. (*Vitis sp.*), and multiflora rose (*Rosa multiflora*).

AREA 5:

Area 5 is located in the southeastern corner of the meadow area (at the apex of the hillside) and is bordered by the wood line to the east and south as well as Areas 1 and 6 to the west. Area 5 currently contains 15% bare ground, a mixture of desirable grasses and sedges and several (approximately 5% coverage), and 80% coverage of non-desirable species, including re-sprouting glossy buckthorn (*Rhamnus frangula*), honeysuckle species (*Lonicera sp.*), cottonwood samplings (*Populus deltoides*), mugwort (*Artemisia vulgaris*), and re-sprouting and/or newly germinated Oriental bittersweet (*Celastrus orbiculatus*).

AREA 6:

Area 6 is east of Area 3 and north of Area 1. All of Area 6 currently contains non-desirable species, which are dominated with Oriental bittersweet (*Celastrus orbiculatus*).

MEADOW RESTORATION PLAN

The restoration approach for each area is specifically developed based on the existing conditions within each area and the desired final conditions for the overall site. The measures proposed to restore each area are presented below. The goal is to reach substantial completion of the restoration (including the establishment of desirable meadow vegetation) for each area by the fall of 2020. However, continued restoration and vegetation management may be necessary for specific area; depending on the success of the implementation of the restoration measures.

AREA 1 RESTORATION ACTIONS

1. Physical removal (via weed wrench, hand-digging, etc.) of glossy buckthorn re-sprouts.
Timing: Completed in summer 2019
2. Installation of desirable meadow herbaceous plantings (2-inch plugs) and seeding
Timing: Completed in fall 2019
3. Follow-up physical removal of non-desirable vegetation
Timing: 2020 growing season

AREA 2 RESTORATION ACTIONS

1. Bare ground areas will be seeding of Meadow Restoration Seed Mixture
Timing: Completed in summer 2019, re-seeded fall 2019
2. Physical removal (via weed wrench, hand-digging, etc.) of non-desirable woody vegetation
Timing: Completed in summer 2019
3. Mowing of non-desirable vegetation that is not physically removed.
Timing: Mown once in summer 2019 and fall 2019
4. Installation of desirable meadow herbaceous plantings (2-inch plugs) and seeding
Timing: Completed in fall 2019
5. Follow-up physical removal of non-desirable vegetation
Timing: 2020 growing season

AREA 3 RESTORATION ACTIONS

1. Physical removal (via weed wrench, hand-digging, etc.) of non-desirable woody vegetation
Timing: Completed in summer 2019
2. Mowing of non-desirable vegetation that is not physically removed.
Timing: Mown once in summer 2019 and fall 2019
3. Installation of desirable meadow herbaceous plantings (2-inch plugs) and seeding
Timing: Completed in fall 2019
4. Follow-up physical removal of non-desirable vegetation
Timing: 2020 growing season

AREA 4 RESTORATION ACTIONS

1. Bare ground areas will be seeding of Meadow Restoration Seed Mixture
Timing: Completed in summer 2019, re-seeded fall 2019
2. Physical removal (via weed wrench, hand-digging, etc.) of non-desirable woody vegetation
Timing: Completed in summer 2019
3. Mowing of non-desirable vegetation that is not physically removed.
Timing: Mown once in summer 2019 and fall 2019
4. Installation of desirable meadow herbaceous plantings (2-inch plugs) and seeding
Timing: Completed in fall 2019
5. Follow-up physical removal of non-desirable vegetation
Timing: 2020 growing season

AREA 5 RESTORATION ACTIONS

1. Bare ground areas will be seeding of Meadow Restoration Seed Mixture
Timing: Completed in summer 2019, re-seeded fall 2019
2. Physical removal (via weed wrench, hand-digging, etc.) of non-desirable woody vegetation (buckthorn, honeysuckle, and cottonwood)
Timing: Completed in summer 2019
3. Mowing of non-desirable vegetation that is not physically removed
Timing: Completed in summer 2019
4. Installation of solarization materials (black plastic) over portions of the restoration area
Timing: Completed in summer 2019
5. Installation of desirable meadow herbaceous plantings (2" plugs) and seeding
Timing: Completed in fall 2020

AREA 6 RESTORATION ACTIONS

1. Mowing/cutting of non-desirable vegetation
Timing: Completed in summer 2019
2. Installation of solarization materials (black plastic) over the restoration area
Timing: Completed in summer 2019

3. Installation of desirable meadow herbaceous plantings (2" plugs) and seeding

Timing: Completed in fall 2020

OPERATION & MAINTENANCE PLAN (2021+)

The intension of the meadow restoration plan is to utilize the 2019 and 2020 growing seasons to alter the existing conditions found within the meadow restoration area to best align the entire site to become a successfully established native wildflower meadow. Additionally, the goal is to create a meadow that requires minimal maintenance and corrective measures on an annual basis.

Once the meadow has become successfully established the Town should anticipate mowing the entire meadow once annually once all wildflowers have matured and have produced the season's seed. Annual to semi-annual hand-cutting of non-desirable vegetation should be anticipated. If non-desirable vegetation persists following the 2020 season alternative restoration measures should be considered including continuation of the restoration actions proposed herein or perhaps spot, cut-stem, directed herbicide applications to eliminate non-desirable species.



4

2

3

6

5

1



Photo 1: Area 1 is dominated currently with grasses and sedges.



Photo 2: Area 2 includes bare soil and non-desirable species.



Photo 3: Area 3 is dominated with daisy fleabane and cottonwood saplings



Photo 4: Area 4 contains bare ground and non-desirable species.



Photo 5: Area 5 includes the southeastern hillside which is primarily non-desirable species.



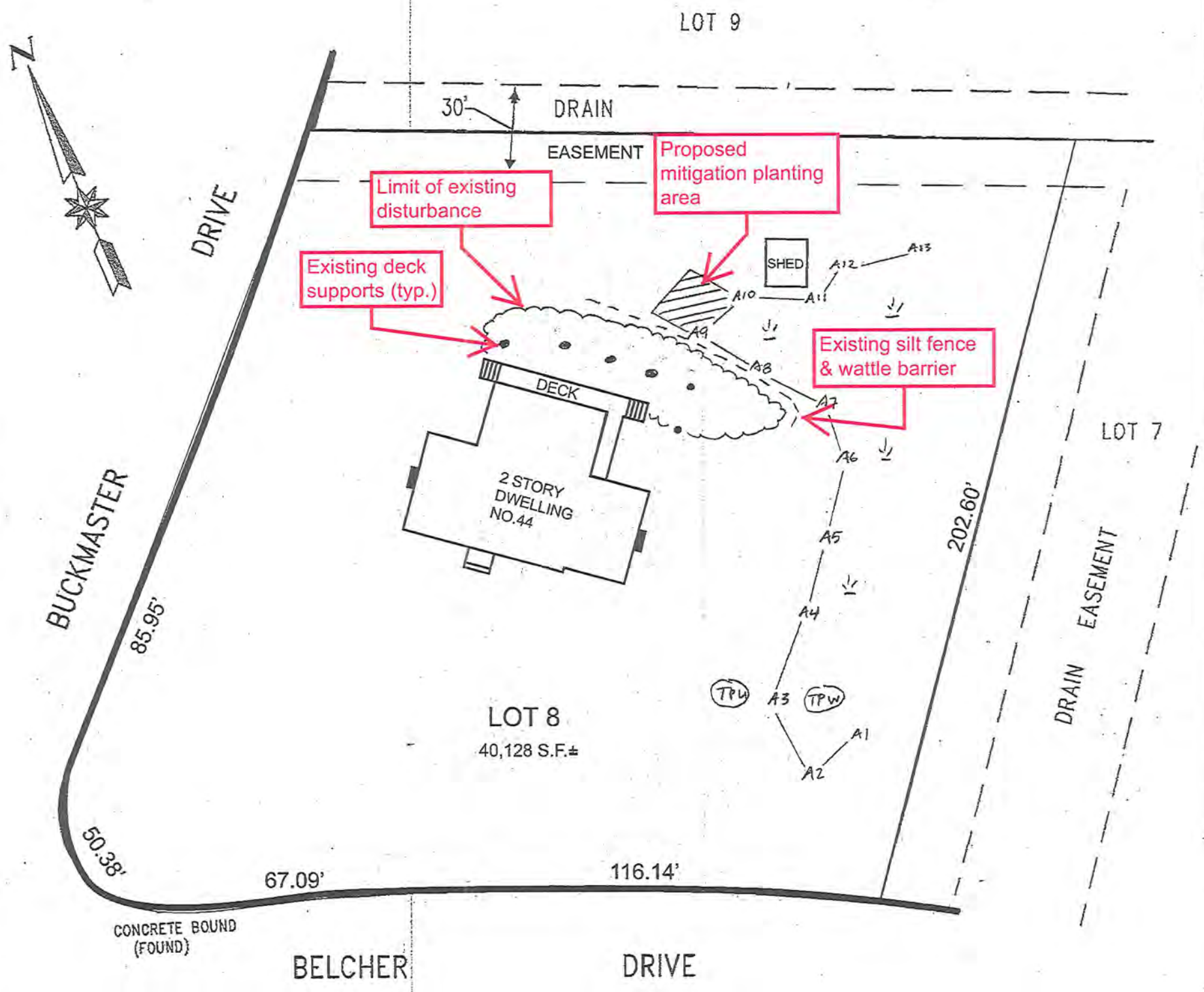
Photo 6: Area 6 is dominated with bitternut, buckthorn and mullein.



Photo 7: Area 6 mullein and non-desirable coverage throughout the area.



Photo 8: Overview of the meadow area from the trail intersection.



EcoTec Wetland Sketch for Notice of Intent
 June 5, 2019
 Approx. Scale 1" = 30'

Project: 44 Belcher Drive, Sudbury

PROJECT NOTES:

1. Wetland flags by EcoTec, Inc., Worcester, MA on May 31, 2019.
2. Sketch based on tape measurements of wetland flags, limits of soil disturbance and support piers.
3. Following construction of new deck on existing supports, disturbed former lawn area will be loamed and seeded.
4. Area under the deck will be covered with crushed stone to stabilize and promote infiltration.
5. Existing, dilapidated and partially removed post and rail fence with wire, will be fully removed and disposed off-site.
6. The hash-marked, 120 square foot buffer area (currently covered with pachysandra), will be planted with native species listed below to mitigate for unpermitted buffer zone disturbance.

MITIGATION PLANTINGS:

Three (3) - 4 to 6 foot tall shadbush (*Amelanchier canadensis*) or Hawthorn (*Crataegus* sp.) or combination of the two.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number

Document Transaction Number

Sudbury

City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

44 Belcher Drive

a. Street Address

Sudbury

b. City/Town

01776

c. Zip Code

Latitude and Longitude:

42.412680

d. Latitude

-71.433730

e. Longitude

D07

f. Assessors Map/Plat Number

0408

g. Parcel /Lot Number

2. Applicant:

Matthew P.

a. First Name

Kathman

b. Last Name

c. Organization

44 Belcher Drive

d. Street Address

Sudbury

e. City/Town

MA

f. State

01776

g. Zip Code

518-256-5458

h. Phone Number

i. Fax Number

matthew.kathman@gmail.com

j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Arthur

a. First Name

Allen

b. Last Name

EcoTec, Inc.

c. Company

102 Grove Street

d. Street Address

Worcester

e. City/Town

MA

f. State

01605

g. Zip Code

508-752-9666

h. Phone Number

i. Fax Number

aallen@ecotecinc.com

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

110

a. Total Fee Paid

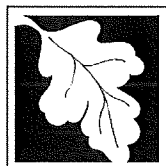
42.50

b. State Fee Paid

67.50

c. City/Town Fee Paid

Arthur Allen
4/17/19
[Signature]



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number

Document Transaction Number

Sudbury

City/Town

A. General Information (continued)

6. General Project Description:

Remove existing deck and construct new deck within buffer zone.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex

a. County

64859

c. Book

b. Certificate # (if registered land)

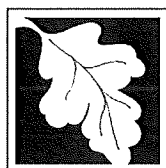
312

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

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WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number _____

Document Transaction Number _____

Sudbury

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet _____	2. linear feet _____
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet _____	2. square feet _____
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet _____	2. square feet _____
	3. cubic yards dredged _____	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet _____	2. square feet _____
	3. cubic feet of flood storage lost _____	4. cubic feet replaced _____
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet _____	
	2. cubic feet of flood storage lost _____	3. cubic feet replaced _____
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland _____	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

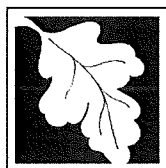
a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number _____

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Document Transaction Number _____

Sudbury _____

City/Town _____

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	

4. Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number _____

Document Transaction Number _____

Sudbury _____

City/Town _____

C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

May 30, 2019

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:

(a) within wetland Resource Area _____ percentage/acreage

(b) outside Resource Area _____ percentage/acreage

2. Assessor's Map or right-of-way plan of site

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number _____

Document Transaction Number _____

Sudbury _____

City/Town _____

C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
2. Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____
3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

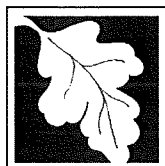
South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Document Transaction Number

Sudbury

City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
- a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
- a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
- a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
- b. No. Check why the project is exempt:
1. Single-family house
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

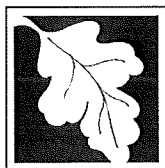
D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number

Document Transaction Number

Sudbury

City/Town

D. Additional Information (cont'd)

3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. List the titles and dates for all plans and other materials submitted with this NOI.

EcoTec Wetland Sketch

a. Plan Title

Arthur Allen

n/a

b. Prepared By

c. Signed and Stamped by

June 5, 2019

1"=30'

d. Final Revision Date

e. Scale

EcoTec Wetland Evaluation Report

June 6, 2019

f. Additional Plan or Document Title

g. Date

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. Attach NOI Wetland Fee Transmittal Form
9. Attach Stormwater Report, if needed.

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

303

2. Municipal Check Number

6/5/2019

3. Check date

304

4. State Check Number

6/5/2019

5. Check date

Matthew P.

6. Payor name on check: First Name

Kathman

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

MassDEP File Number _____

Document Transaction Number _____

Sudbury _____

City/Town _____

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES
102 Grove Street
Worcester, MA 01605-2629
508-752-9666 / Fax: 508-752-9494

June 5, 2019

Matthew Kathman
44 Belcher Drive
Sudbury, MA 01776

RE: Wetland Resource Evaluation, 44 Belcher Drive, Sudbury, MA

Dear Matthew:

On May 31, 2019, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the “Act”) and its implementing regulations (310 CMR 10.00 *et seq.*; the “Regulations”); and (2) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands). Arthur Allen, CPSS, CWS conducted the inspection.

The subject site consists of a 0.921-acre parcel located at the northeast corner of Belcher and Buckmaster Drives. The upland portions of the site are largely developed with a single-family home, driveway and landscaping. The wetland resources observed on the site are described below.

Methodology

The site was inspected, and areas suspected to qualify as wetland resources were identified. The boundary of Bordering Vegetated Wetlands was delineated in the field in accordance with the definition set forth in the regulations at 310 CMR 10.55(2)(c). Section 10.55(2)(c) states that “The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.” The methodology used to delineate Bordering Vegetated Wetlands is further described in: (1) the BVW Policy “*BVW: Bordering Vegetated Wetlands Delineation Criteria and Methodology*,” issued March 1, 1995; and (2) “*Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook*,” produced by the Massachusetts Department of Environmental Protection, dated March 1995. The plant taxonomy used in this report is based on the *National Wetland Plant List (Massachusetts 2012 Final State Wetland Plant List)*, ERDC/CRREL TR-12-11 (Lichvar, 2012). Federal wetlands were presumed to have boundaries conterminous with the delineated Bordering Vegetated Wetlands. One set of DEP Bordering Vegetated Wetland Delineation Field Data Forms completed for observation plots located in the wetlands and uplands near flag A-3 is attached.

Findings

Wetland A (i.e., blue flags A-1 to A-13) consists of a wooded swamp located on the east side of the site. Plant species observed include red maple (*Acer rubrum*) and American elm (*Ulmus americana*), trees, saplings, and/or shrubs; eastern poison-ivy (*Toxicodendron radicans*) climbing woody vines; highbush blueberry (*Vaccinium corymbosum*), common winterberry (*Ilex verticillata*), southern arrow-wood (*Viburnum dentatum*) and European buckthorn (*Rhamnus cathartica*) shrubs; and sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*), jewelweed (*Impatiens capensis*) and skunk cabbage (*Symplocarpus foetidus*) ground cover. Evidence of wetland hydrology, including hydric soils, high groundwater, saturated soils, pore linings and evidence of flooding was observed within the delineated wetland. This vegetated wetland borders an intermittent stream; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands and the intermittent stream would be regulated as Bank under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands under the Act.

Bordering Land Subject to Flooding is an area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 10.57(2)(a)3. states that "The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm." The most recent National Flood Insurance Program flood profile data indicates that Bordering Land Subject to Flooding does not occur on the site. Bordering Land Subject to Flooding would occur in areas where the 100-year flood elevation is located outside of or upgradient of the delineated Bordering Vegetated Wetlands boundary. Bordering Land Subject to Flooding does not have a Buffer Zone under the Act. A copy of the most recent FEMA/FIRM flood zone map is attached to this report.

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map (attached) and observations made during the site inspection, there are no mapped or unmapped stream located within 200 feet of the site. Accordingly, Riverfront Area would not occur on the site. Riverfront Area does not have a Buffer Zone under the Act.

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 14th edition, Priority Habitats and Estimated Habitats, valid from August 1, 2017, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; "MESA") and MESA Regulations (321 CMR 10.00 *et seq.*)], or Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities. A brief description of my experience and qualifications is attached. If you have any questions, please feel free to contact me at any time.

Wetland Resource Evaluation, 44 Belcher Dr., Sudbury, MA
June 5, 2019
Page 3.

Cordially,
ECOTEC, INC.

A handwritten signature in blue ink, appearing to read 'Arthur Allen', with a long horizontal flourish extending to the right.

Arthur Allen, CPSS, CWS, CESSWI, ASE
Vice President

Attachments (5, 8 pages)

AA/Wetland/Sudbury 44 Belcher Wet Report 6.5.2019

EcoTec, Inc.

QUALIFICATIONS

Arthur Allen, CPSS, CWS, CESSWI
Vice President
Soil & Wetland Scientist

Arthur Allen is the Vice President of EcoTec, Inc. and has been a senior environmental scientist there since 1995. His work with EcoTec has involved wetland delineation, wildlife habitat evaluation, environmental permitting (federal, state and local), environmental monitoring, expert testimony, peer reviews, contaminated site assessment and the description, mapping and interpretation of soils. His clients have included private landowners, developers, major corporations and regulatory agencies. Prior to joining EcoTec, Mr. Allen mapped and interpreted soils in Franklin County, MA for the U.S.D.A. Natural Resources Conservation Service (formerly Soil Conservation Service) and was a research soil scientist at Harvard University's Harvard Forest. Since 1994, Mr. Allen has assisted the Massachusetts Department of Environmental Protection and the Massachusetts Association of Conservation Commissions as an instructor in the interpretation of soils for wetland delineation and for the Title V Soil Evaluator program.

Mr. Allen has a civil service rating as a soil scientist, an undergraduate degree in Natural Resource Studies and a graduate certificate in Soil Studies. His work on the Franklin County soil survey involved interpretation of landscape-soil-water relationships, classifying soils and drainage, and determining use and limitation of the soil units that he delineated. As a soil scientist at the Harvard Forest, Mr. Allen was involved in identifying the legacies of historical land-use in modern soil and vegetation at a number of study sites across southern New England. He has a working knowledge of the chemical and physical properties of soil and water and how these properties interact with the plants that grow on a given site. While at Harvard Forest he authored and presented several papers describing his research results which were later published. In addition to his aforementioned experience, Mr. Allen was previously employed by the Trustees of Reservations as a land manager and by the Town of North Andover, MA as a conservation commission intern.

Education:

1993-Graduate Certificate in Soil Studies, University of New Hampshire
1982-Bachelor of Science in Natural Resource Studies, University of Massachusetts

Professional Affiliations:

Certified Professional Soil Scientist (ARCPACS CPSS #22529)
New Hampshire Certified Wetland Scientist (#19)
Registered Professional Soil Scientist – Society of Soil Scientists of SNE [Board Member (2000-2006)]
Certified Erosion, Sediment & Stormwater Inspector (#965)
Approved Soil Evaluator (#13764)
Massachusetts Arborists Association-Certified Arborist (1982 – 1998)
New England Hydric Soils Technical Committee member
Massachusetts Association of Conservation Commissions member
Society of Wetland Scientists member

Refereed Publications:

Soil Science and Survey at Harvard Forest. A.Allen. In: Soil Survey Horizons. Vol. 36, No. 4, 1995, pp. 133-142.
Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. G.Motzkin, D.Foster, A.Allen, J.Harrold, & R.Boone. In: Ecological Monographs 66(3), 1996, pp. 345-365.
Vegetation Patterns in Heterogeneous Landscapes: The Importance of History and Environment. G.Motzkin, P.Wilson, D.R.Foster & A.Allen. In: Journal of Vegetation Science 10, 1999, pp. 903-920.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant: _____ Prepared by: EcoTec, Inc _____ Project Location: 44 Belcher dr Sudbury _____ DEP File # _____

Section I. Vegetation _____ Number: TP-Up _____ Transect # A-3 _____ Date of Delin: 5.31.19 _____

A. Sample layer and plant species (Enter largest to smallest % cover by layer)	Percent Cover (or basal area)	Percent Dominance	Dominant Plant?	Wetland Indicator Category
Tree Red maple Acer rubrum	80		100.0 YES	FAC *
Sapling				
Shrub Rhododendron Rhododendron sp.	10		100.0 YES	NL
Ground pachysandra Non native iris Pachysandra terminalis Iris sp.	80 20		80.0 YES 20.0 YES	NL NL
Vine				

Vegetation Conclusions	
Number of dominant wetland indicator plants	1
Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?	NO
Number of dominant non-wetland indicator plants	3

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant	Prepared by: EcoTec, Inc	Project Location: 44 Belcher dr Sudbury	DEP File #
Section II. Indicators of Hydrology	Number: TP-Up	Transect # A-3	Date of Delin: 5.31.19

1. Soil Survey

Is there a published soil survey for this site?

title/date

map number

soil type mapped

hydric soil inclusions

Are field observations consistent with soil survey?

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
Litter	0		
A	0-10	10YR3/2	
Bw	10-16	10YR4/4	

Remarks Gravelly loamy sand

3. Other

Conclusion: Is the soil hydric? No

Other Indicators of hydrology (check all that apply):

- Site Inundated
- Depth to free water in observation hole
- Depth to soil saturation in observation hole
- Water marks
- Drift lines
- Sediment Deposits
- Drainage patterns in BVWs
- Oxidized rhizospheres
- Water stained leaves
- Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- Other:

Vegetation and Hydrology Conclusion

- | | | |
|---|--------------------------|-------------------------------------|
| Number of wetland indicator plants ≥ number of non-wetland indicator plants | Yes | No |
| | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Wetland hydrology present: | | |
| Hydric soil present | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other indicators of hydrology present | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Sample Location is in a BVW | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant: _____ Prepared by: EcoTec, Inc. Project Location: 44 Belcher Dr Sudbury DEP File # _____
 Section I. Vegetation Number: TP-Wet Transect # A-3 Date of Delin: 5.31.19

A. Sample layer and plant species (Enter largest to smallest % cover by layer)	Percent Cover (or basal area)	Percent Dominance	Dominant Plant?	Wetland Indicator Category
Tree Red maple	100	100.0	YES	FAC *
Sapling Eastern hemlock	20	40.0	YES	FACU*
Red spruce	20	40.0	YES	FACU
American elm	10	20.0	YES	FACW-
Shrub Glossy buckthorn	30	100.0	YES	FAC *
Ground pachysandra	80	80.0	YES	NL
Poison ivy	20	20.0	YES	FAC *
Vine				

Vegetation Conclusions		
Number of dominant wetland indicator plants	4	3
Is the number of dominant wetland plants equal or greater than the number of dominant non-wetland plants?	YES	YES

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Form

Applicant	Prepared by: EcoTec, Inc	Project Location: 44 Belcher Dr Sudbury	DEP File #
Section II. Indicators of Hydrology	Number: TP-Wet	Transect # A-3	Date of Delin: 5.31.19

1. Soil Survey

Is there a published soil survey for this site?

title/date

map number

soil type mapped

hydric soil inclusions

Site Inundated

Depth to free water in observation hole 12"

Depth to soil saturation in observation hole 0"

Water marks

Drift lines

Sediment Deposits

Drainage patterns in BVWs

Oxidized rhizospheres

Water stained leaves

Recorded data (stream, lake, or tidal gauge; aerial photo; other):

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottle Color
Litter	2"		
Oa	0-36+		

Remarks:

Remarks

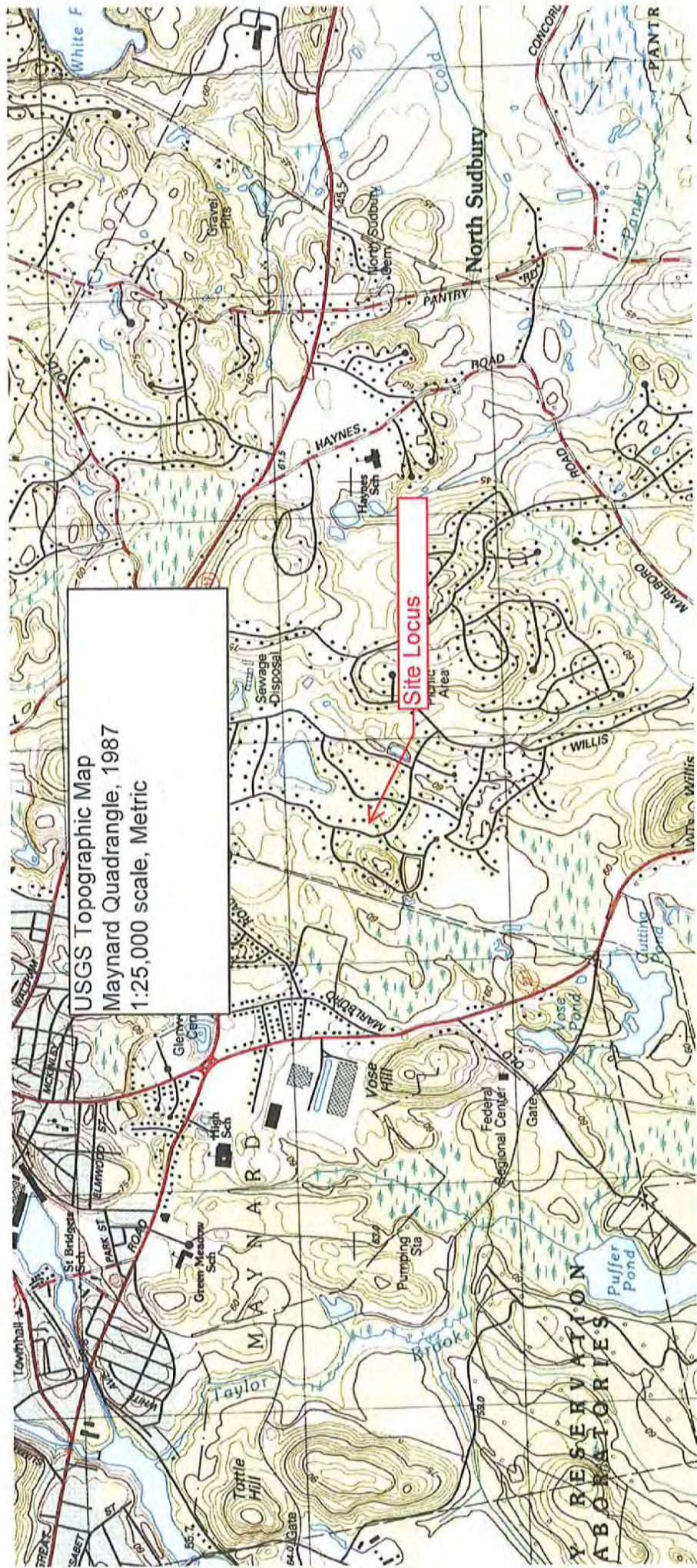
3. Other

Conclusion: Is the soil hydric?

Yes

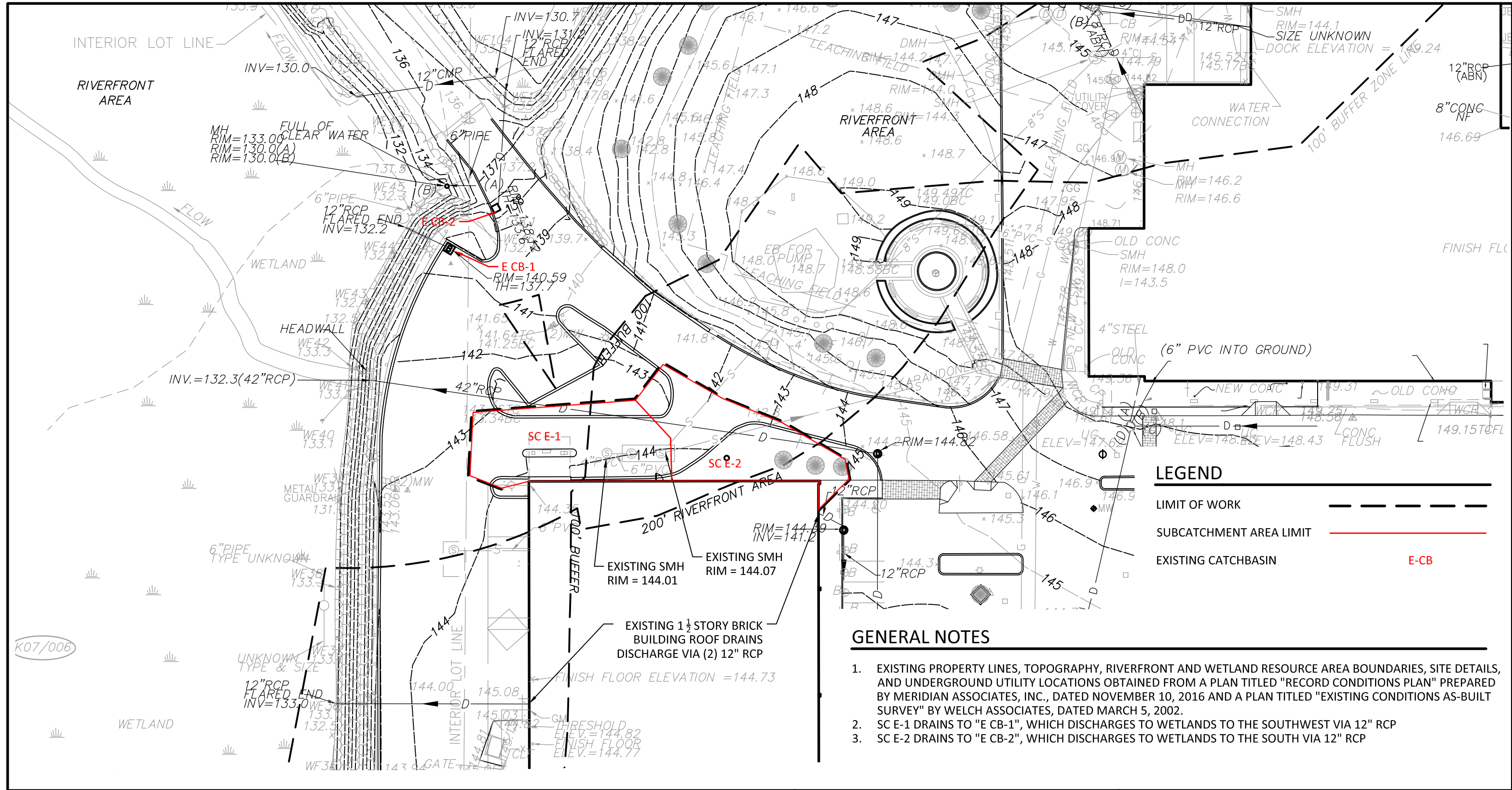
Other Indicators of hydrology (check all that apply):

Vegetation and Hydrology Conclusion	Yes	No
Number of wetland indicator plants \geq number of non-wetland indicator plants	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wetland hydrology present:		
Hydric soil present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other indicators of hydrology present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample Location is in a BVW	<input checked="" type="checkbox"/>	<input type="checkbox"/>



USGS Topographic Map
Maynard Quadrangle, 1987
1:25,000 scale, Metric

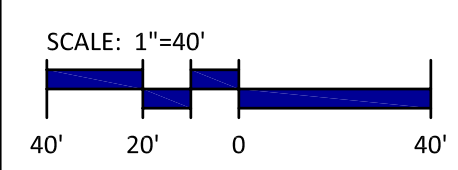
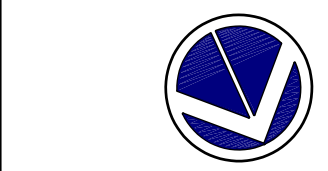
Site Locus



LEGEND	
LIMIT OF WORK	-----
SUBCATCHMENT AREA LIMIT	_____
EXISTING CATCHBASIN	E-CB

GENERAL NOTES

1. EXISTING PROPERTY LINES, TOPOGRAPHY, RIVERFRONT AND WETLAND RESOURCE AREA BOUNDARIES, SITE DETAILS, AND UNDERGROUND UTILITY LOCATIONS OBTAINED FROM A PLAN TITLED "RECORD CONDITIONS PLAN" PREPARED BY MERIDIAN ASSOCIATES, INC., DATED NOVEMBER 10, 2016 AND A PLAN TITLED "EXISTING CONDITIONS AS-BUILT SURVEY" BY WELCH ASSOCIATES, DATED MARCH 5, 2002.
2. SC E-1 DRAINS TO "E CB-1", WHICH DISCHARGES TO WETLANDS TO THE SOUTHWEST VIA 12" RCP
3. SC E-2 DRAINS TO "E CB-2", WHICH DISCHARGES TO WETLANDS TO THE SOUTH VIA 12" RCP



Prepared For:
Gravestar, Inc.
 Cambridge, Massachusetts

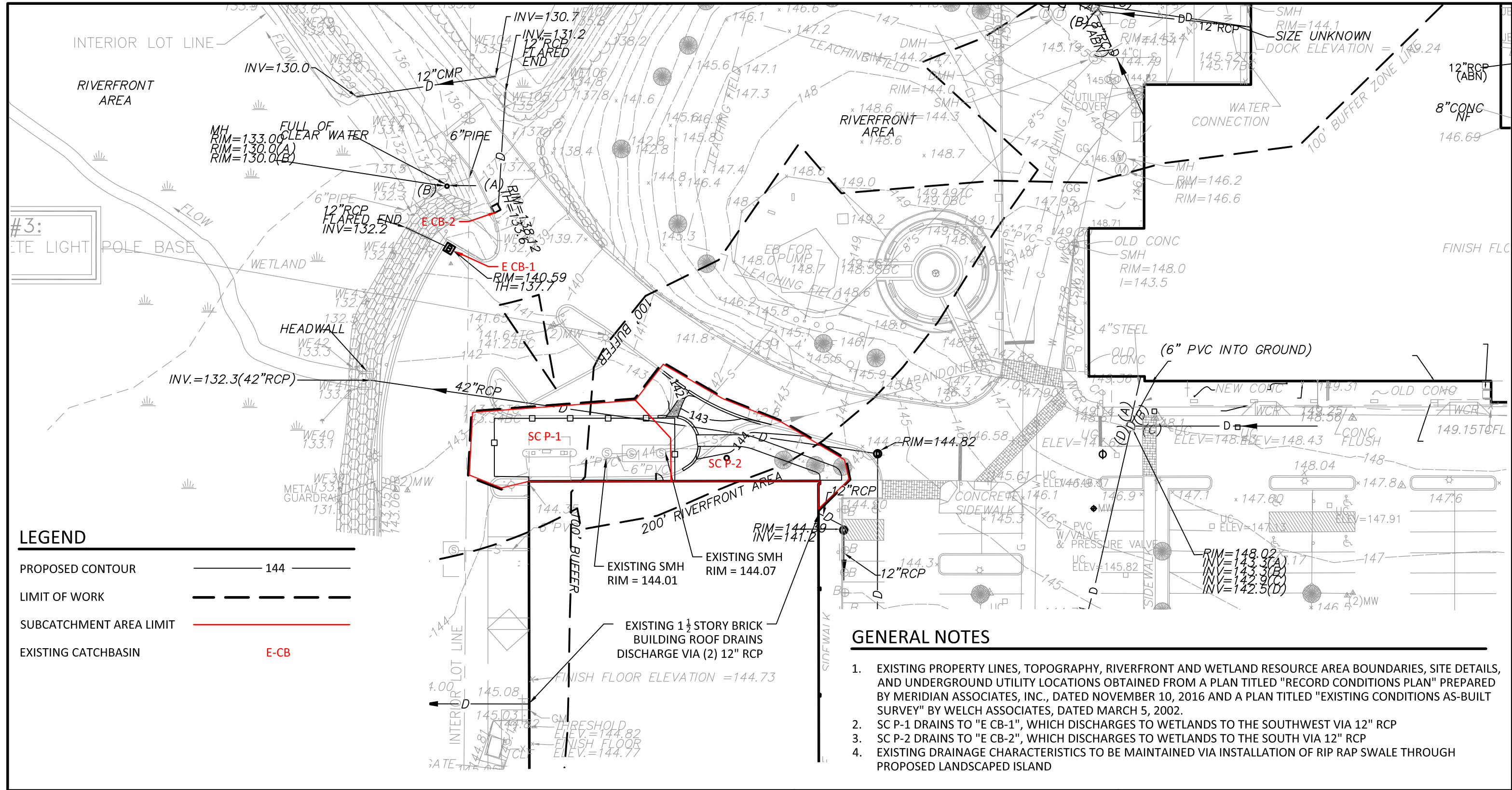
Prepared By:
MERIDIAN ASSOCIATES

69 MILK STREET, SUITE 302, WESTBOROUGH, MA 01581 508.871.7030
 500 CUMMINGS CENTER, SUITE 590 BEVERLY, MA 01915 1978.299.0447
 www.MeridianAssoc.com

Existing Conditions Subcatchment Areas
Sudbury Plaza Proposed Garden Center
 505 Boston Post Road
 Sudbury, MA

Scale: 1"=20'
 Project No. 8460

Date: June 13, 2019
 Dwg No. 8460 SITE2019.dwg
 Sheet 1 of 2

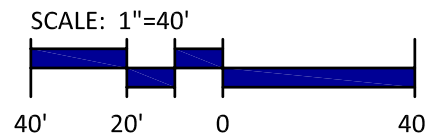


LEGEND

PROPOSED CONTOUR	—— 144 ——
LIMIT OF WORK	-----
SUBCATCHMENT AREA LIMIT	—————
EXISTING CATCHBASIN	E-CB

GENERAL NOTES

1. EXISTING PROPERTY LINES, TOPOGRAPHY, RIVERFRONT AND WETLAND RESOURCE AREA BOUNDARIES, SITE DETAILS, AND UNDERGROUND UTILITY LOCATIONS OBTAINED FROM A PLAN TITLED "RECORD CONDITIONS PLAN" PREPARED BY MERIDIAN ASSOCIATES, INC., DATED NOVEMBER 10, 2016 AND A PLAN TITLED "EXISTING CONDITIONS AS-BUILT SURVEY" BY WELCH ASSOCIATES, DATED MARCH 5, 2002.
2. SC P-1 DRAINS TO "E CB-1", WHICH DISCHARGES TO WETLANDS TO THE SW VIA 12" RCP
3. SC P-2 DRAINS TO "E CB-2", WHICH DISCHARGES TO WETLANDS TO THE SOUTH VIA 12" RCP
4. EXISTING DRAINAGE CHARACTERISTICS TO BE MAINTAINED VIA INSTALLATION OF RIP RAP SWALE THROUGH PROPOSED LANDSCAPED ISLAND



Prepared For:
Gravestar, Inc.
 Cambridge, Massachusetts

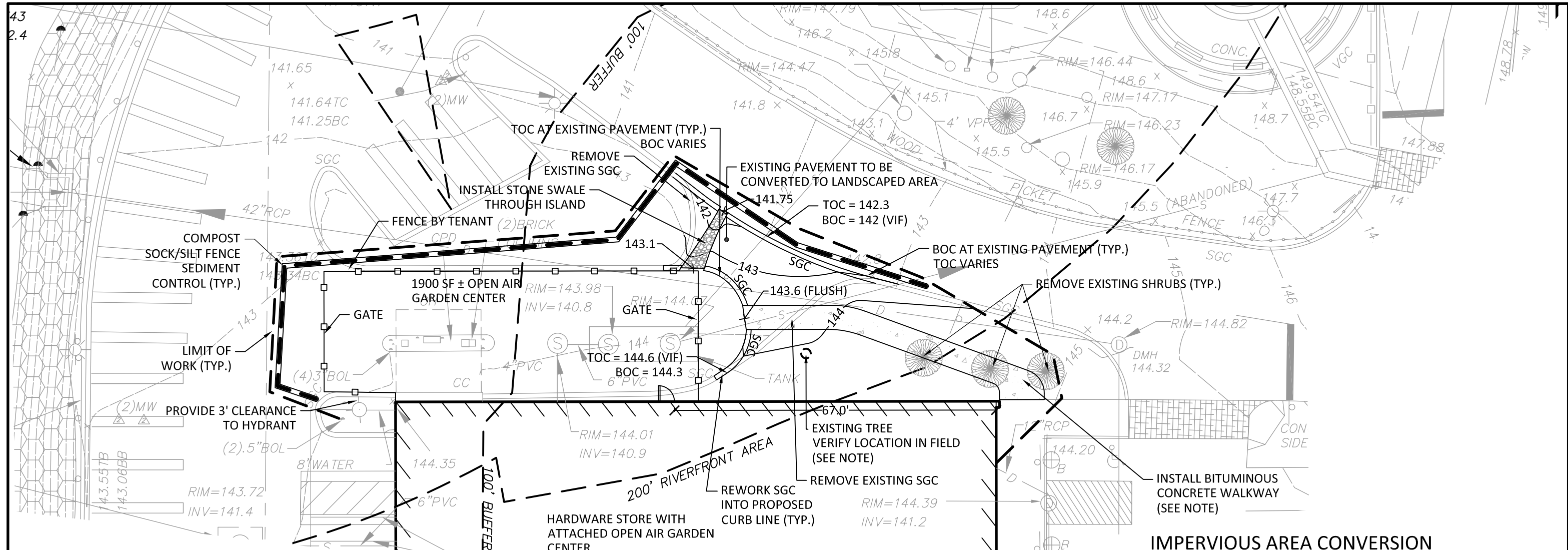
Prepared By:
MERIDIAN ASSOCIATES

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 500 CUMMINGS CENTER, SUITE 590 BEVERLY, MA 01915 1978.299.0447
 www.MeridianAssoc.com

Proposed Conditions Subcatchment Areas
Sudbury Plaza Proposed Garden Center
 505 Boston Post Road
 Sudbury, MA

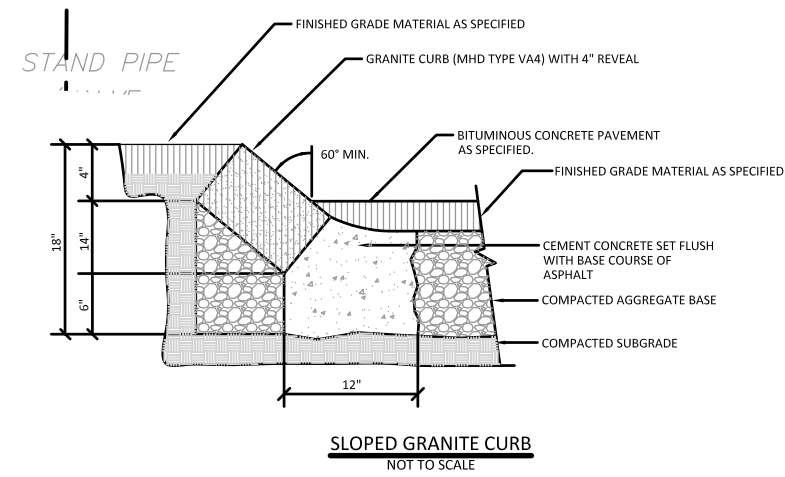
Scale: 1"=20'
 Project No. 8460

Date: June 13, 2019
 Dwg No. 8460 SITE2019.dwg
 Sheet 2 of 2



LEGEND

PROPOSED CONTOUR	———— 144 ————
LIMIT OF WORK	-----
EROSION CONTROL BARRIER	=====
FENCELINE	—□—□—□—□—
VERIFY IN FIELD	VIF
SLOPED GRANITE CURB	SGC
TOP OF CURB	TOC
BOTTOM OF CURB	BOC

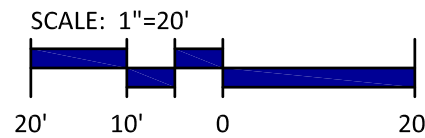


IMPERVIOUS AREA CONVERSION

PAVEMENT AND CURBING CONVERTED TO LANDSCAPED ISLAND: 405 SF
 PROPOSED BITUMINOUS CONCRETE WALKWAY: 335 SF
 CONCRETE WALKWAY CONSTRUCTED OVER EXISTING PAVEMENT: 48 SF
 NET DECREASE IN IMPERVIOUS AREA: 118 SF

GENERAL NOTES

- EXISTING PROPERTY LINES, TOPOGRAPHY, RIVERFRONT AND WETLAND RESOURCE AREA BOUNDARIES, SITE DETAILS, AND UNDERGROUND UTILITY LOCATIONS OBTAINED FROM A PLAN TITLED "RECORD CONDITIONS PLAN" PREPARED BY MERIDIAN ASSOCIATES, INC., DATED NOVEMBER 10, 2016 AND A PLAN TITLED "EXISTING CONDITIONS AS-BUILT SURVEY" BY WELCH ASSOCIATES, DATED MARCH 5, 2002.
- PROPOSED BITUMINOUS CONCRETE WALKWAY TO HAVE 1.5% MAXIMUM CROSS SLOPE AND 5% MAXIMUM RUNNING SLOPE.
- INSTALL SILT SACKS IN ALL CATCHBASINS DOWN SLOPE OF PROPOSED WORK
- VERIFY EXISTING TREE LOCATION IN FIELD. PROPOSED WALKWAY IS TO BE ROUTED AROUND TREE AND ROOT SYSTEM.



Prepared For:
Gravestar, Inc.
 Cambridge, Massachusetts

Prepared By:
MERIDIAN ASSOCIATES

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 500 CUMMINGS CENTER, SUITE 5950 BEVERLY, MA 01915 978.299.0447
 www.MeridianAssoc.com

Sudbury Plaza Proposed Garden Center
 505 Boston Post Road Scale: 1"=20'
 Sudbury, MA Project No. 8460

Date: May 9, 2019
 Revised: June 13, 2019
 Dwg No. 8460 SITE2019.dwg
 Sheet 2 of 2